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INTRODUCTION TO THE OUTLINES OF A SYSTEM OF NATURAL PHILOSOPHY;

OR,

ON THE IDEA OF SPECULATIVE PHYSICS AND THE INTERNAL ORGANIZATION OF A SYSTEM OF THIS SCIENCE.

1799.

[Translated from the German of SCHELLING, by TOM DAVIDSON.]

I.

WHAT WE CALL NATURAL PHILOSOPHY IS A NECESSARY SCIENCE IN THE SYSTEM OF KNOWING.

The Intelligence is productive in two modes—that is, either blindly and unconsciously, or freely and consciously;—unconsciously productive in external intuition, consciously in the creation of an ideal world.

Philosophy removes this distinction by assuming the unconscious activity as originally identical, and, as it were, sprung from the same root with the conscious; this identity is by it *directly* proved in the case of an activity at once clearly conscious and unconscious, which manifests itself in the productions of genius, *indirectly*, outside of consciousness, in the products of *Nature*, so far as in them all, the most complete fusion of the Ideal with the Real is perceived.

Since philosophy assumes the unconscious, or, as it may likewise be termed, the real activity as identical with the conscious or ideal, its tendency will originally be to bring back everywhere the real to the ideal—a process which gives birth to what is called Transcendental Philosophy. The regularity displayed in all the movements of Nature—for example, the sublime geometry which is exercised in the motions of the heavenly bodies—is not explained by saying that Nature is the most perfect geometry; but conversely, by saying that the most perfect geometry is what produces in Nature;—a mode of explanation whereby the Real itself is transported into the ideal world, and those motions are changed into intuitions, which take place only in ourselves, and to which nothing outside of us corresponds. Again, the fact that Nature, wherever it is left to itself, in every transition from a fluid to a solid state, produces, of its own accord, as it were, regular forms—which regularity, in the higher species of crystallization, namely, the organic, seems to become purpose even; or the fact that in the animal kingdom—that product of the blind forces of Nature—we see actions arise which are equal in regularity to those that take place with consciousness, and even external works of art, perfect in their kind;—all

this is not explained by saying that it is an unconscious productivity, though in its origin akin to the conscious, whose mere reflex we see in Nature, and which, from the stand-point of the natural view, must appear as one and the same blind tendency, which exerts its influence from crystallization upwards to the highest point of organic formation (in which, on one side, through the art-tendency, it returns again to mere crystallization) only acting upon different planes.

According to this view, inasmuch as Nature is only the visible organism of our understanding, Nature *can* produce nothing but what shows regularity and design, and Nature is *compelled* to produce that. But if Nature can produce only the regular, and produces it from necessity, it follows that the origin of such regular and design-evincing products must again be capable of being proved necessary in Nature, regarded as self-existent and real, and in the relation of its forces;—*that therefore, conversely, the Ideal must arise out of the Real, and admit of explanation from it.*

If, now, it is the task of Transcendental Philosophy to subordinate the Real to the Ideal, it is, on the other hand, the task of Natural Philosophy to explain the Ideal by the Real. The two sciences are therefore but one science, whose two problems are distinguished by the opposite directions in which they move; moreover, as the two directions are not only equally possible, but equally necessary, the same necessity attaches to both in the system of knowing.

II.

SCIENTIFIC CHARACTER OF NATURAL PHILOSOPHY.

Natural Philosophy, as the opposite of Transcendental Philosophy, is distinguished from the latter chiefly by the fact that it posits Nature (not, indeed, in so far as it is a product, but in so far as it is at once productive and product) as the self-existent; whence it may be most briefly designated as the Spinozism of Physics. It follows naturally from this that there is no place in this science for idealistic methods of explanation, such as Transcendental Philosophy is fitted to supply, from the circumstance that for it Nature is nothing more than the organ of self-consciousness, and everything in Nature is necessary merely because it is only through the medium of such a Nature that self-consciousness can take place; this mode of explanation, however, is as meaningless in the case of physics, and of our science which occupies the same standpoint with it, as were the old teleological modes of explanation, and the introduction of a universal reference to final causes into the thereby metamorphosed science of Nature. For every idealistic mode of explanation, dragged out of its own proper sphere and applied to the explanation of Nature, degenerates into the most adventurous nonsense, examples of which are well known. The first maxim of all true natural science, viz., to explain everything by the forces of Nature, is therefore accepted in its widest extent in our science, and even extended to that region, at the limit of which all interpretation of Nature has hitherto been accustomed to stop short; for example, to those organic phenomena which seem to pre-suppose an analogy with reason. For, granted that in the actions of animals there really is something which pre-supposes such analogy, on the principle of realism, nothing further would follow than that what we call reason is a mere play of higher and necessarily unknown natural forces. For, inasmuch as all thinking is at last reducible to a producing and reproducing, there is nothing impossible in the thought that the same activity by which Nature reproduces itself anew in each successive phase, is reproductive in thought through the medium of the organism (very much in the same manner in which, through the action and play of light, Nature, which exists independently of it, is created immaterial, and, as it were, for a second time), in which circumstance it is natural that what forms the limit of our intuitive faculty, no longer falls within the sphere of our intuition itself.

III.

NATURAL PHILOSOPHY IS SPECULATIVE PHYSICS.

Our science, as far as we have gone, is thoroughly and completely realistic; it is therefore nothing other than Physics, it is only *speculative* Physics; in its tendency it is exactly what the systems of the ancient physicists were, and what, in more recent times, the system of the restorer of Epicurean philosophy is, viz., Lesage's Mechanical Physics, by which the speculative spirit in physics, after a long scientific sleep, has again, for the first time, been awakened. It cannot be shown in detail here (for the proof itself falls within the sphere of our science), that on the mechanical or atomistic basis which has been adopted by Lesage and his most successful predecessors, the idea of speculative physics is incapable of realization. For, inasmuch as the first problem of this science, that of inquiring into the *absolute* cause of motion (without which Nature is not in itself a finished whole), is absolutely incapable of a mechanical solution, seeing that mechanically motion results only from motion *ad infinitum*, there remains for the real construction of speculative physics only one way open, viz., the dynamic, which lays down that motion arises not only from motion, but even from rest; that, therefore, there is motion in the rest of Nature, and that all mechanical motion is the merely secondary and derivative motion of that which is solely primitive and original, and which wells forth from the very first factors in the construction of a nature generally (the fundamental forces).

In hereby making clear the points of difference between our undertaking and all those of a similar nature that have hitherto been attempted, we have at the same time shown the difference between speculative physics and so-called empirical physics; a difference which in the main may be reduced to this, that the former occupies itself solely and entirely with the original causes of motion in nature, that is, solely with the dynamical phenomena; the latter, on the contrary, inasmuch as it never reaches a final source of motion in nature, deals only with the secondary motions, and even with the original ones only as mechanical (and therefore likewise capable of mathematical construction). The former, in fact, aims generally at the inner spring-work and what is *non-objective* in Nature; the latter, on the contrary, only at the *surface* of Nature, and what is objective, and, so to speak, *outside* in it.

IV.

ON THE POSSIBILITY OF SPECULATIVE PHYSICS.

Inasmuch as our inquiry is directed not so much upon the phenomena of Nature as upon their final grounds, and our business is not so much to deduce the latter from the former as the former from the latter, our task is simply this: to erect a science of Nature in the strictest sense of the term; and in order to find out whether speculative physics are possible, we must know what belongs to the possibility of a doctrine of Nature viewed as science.

(*a*) The idea of knowing is here taken in its strictest sense, and then it is easy to see that, in this acceptation of the term, we can be said to know objects only when they are such that we see the principles of their possibility, for without this insight my whole knowledge of an object, e. g. of a machine, with whose construction I am unacquainted, is a mere seeing, that is, a mere conviction of its existence, whereas the inventor of the machine has the most perfect knowledge of it, because he is, as it were, the soul of the work, and because it preëxisted in his head before he exhibited it as a reality.

Now, it would certainly be impossible to obtain a glance into the internal construction of Nature, if an invasion of Nature were not possible through freedom. It is true that Nature acts openly and freely; its acts however are never isolated, but performed under a concurrence of a host of causes, which must first be excluded if we are to obtain a pure result. Nature must therefore be compelled to act under certain definite conditions, which either do not exist in it at all, or else exist only as modified by others.—Such an invasion of Nature we call an experiment. Every experiment is a question put to Nature, to which she is

compelled to give a reply. But every question contains an implicit *à priori* judgment; every experiment that is an experiment, is a prophecy; experimenting itself is a production of phenomena. The first step, therefore, towards science, at least in the domain of physics, is taken when we ourselves begin to produce the objects of that science.

(*b*) We *know* only the self-produced; knowing, therefore, in the *strictest* acceptation of the term, is a *pure* knowing *à priori*. Construction by means of experiment, is, after all, an absolute self-production of the phenomena. There is no question but that much in the science of Nature may be known comparatively *à priori*; as, for example, in the theory of the phenomena of electricity, magnetism, and even light. There is such a simple law recurring in every phenomenon that the results of every experiment may be told beforehand; here my knowing follows immediately from a known law, without the intervention of any particular experience. But whence then does the law itself come to me? The assertion is, that all phenomena are correlated in one absolute and necessary law, from which they can all be deduced; in short, that in natural science all that we know, we know absolutely *à priori*. Now, that experiment never leads to such a knowing, is plainly manifest, from the fact that it can never get beyond the forces of Nature, of which itself makes use as means.

As the final causes of natural phenomena are themselves not phenomenal, we must either give up all attempt ever to arrive at a knowledge of them, or else we must altogether put them into Nature, endow Nature with them. But now, that which we put into Nature has no other value than that of a pre-supposition (hypothesis), and the science founded thereon must be equally hypothetical with the principle itself. This it would be possible to avoid only in one case, viz., if that presupposition itself were involuntary, and as necessary as Nature itself. Assuming, for example, what must be assumed, that the sum of phenomena is not a mere world, but of necessity a Nature—that is, that this whole is not merely a product, but at the same time productive, it follows that in this whole we can never arrive at absolute identity, inasmuch as this would bring about an absolute transition of Nature, in as far as it is productive, into Nature as product, that is, it would produce absolute rest; such wavering of Nature, therefore, between productivity and product, will, of necessity, appear as a universal duplicity of principles, whereby Nature is maintained in continual activity, and prevented from exhausting itself in its product; and universal duality as the principle of explanation of Nature will be as necessary as the idea of Nature itself.

This absolute hypothesis must carry its necessity within itself, but it must, besides this, be brought to empiric proof; for, inasmuch as all the phenomena of Nature cannot be deduced from this hypothesis as long as there is in the whole system of Nature a single phenomenon which is not necessary according to that principle, or which contradicts it, the hypothesis is thereby at once shown to be false, and from that moment ceases to have validity as an hypothesis.

By this deduction of all natural phenomena from an absolute hypothesis, our knowing is changed into a construction of Nature itself, that is, into a science of Nature *à priori*. If, therefore, such deduction itself is possible, a thing which can be proved only by the fact, then also a doctrine of Nature is possible as a science of Nature; a system of purely speculative physics is possible, which was the point to be proved.

Remark.—There would be no necessity for this remark, if the confusion which still prevails in regard to ideas perspicuous enough in themselves did not render some explanation with regard to them requisite.

The assertion that natural science must be able to deduce all its principles *à priori*, is in a measure understood to mean that natural science must dispense with all experience, and, without any intervention of experience, be able to spin all its principles out of itself—an affirmation so absurd that the very objections to it deserve pity.

Not only do we know this or that through experience, but we originally know nothing at all except through experience, and by means of experience, and in this sense the whole of our knowledge consists of the data of experience. These data become *à priori* principles when we become conscious of them as necessary, and thus every datum, be its import what it may, may be raised to that dignity, inasmuch as the distinction between *à priori* and *à posteriori* data is not at all, as many people may have imagined, one originally cleaving to the data themselves, but is a distinction made solely *with respect to our knowing*, and the *kind* of our knowledge of these data, so that every datum which is merely historical for me—i. e. a datum of experience—becomes, notwithstanding, an *à priori* principle as soon as I arrive, whether directly or indirectly, at insight into its internal necessity. Now, however, it must in all cases be possible to recognize every natural phenomenon as absolutely necessary; for, if there is no chance in nature at all, there can likewise be no original phenomenon of Nature fortuitous; on the contrary, for the very reason that Nature is a system, there must be a necessary connection for everything that happens or comes to pass in it, in some principle embracing the whole of Nature. Insight into this internal necessity of all natural phenomena becomes, of course, still more complete, as soon as we reflect that there is no real system which is not, at the same time, an organic whole. For if, in an organic whole, all things mutually bear and support each other, then this organization must have existed as a whole previous to its parts—the whole could not have arisen from the parts, but the parts must have arisen out of the whole. *It is not, therefore,* WE KNOW *Nature, but Nature* IS, *à priori*, that is, everything individual in it is predetermined by the whole or by the idea of a Nature generally. But if Nature is *à priori*, then it must be possible to *recognize* it *as* something that is *à priori*, and this is really the meaning of our affirmation.

Such a science, like every other, does not deal with the hypothetical, or the merely probable, but depends upon the evident and the certain. Now, we may indeed be quite certain that every natural phenomenon, through whatever number of intermediate links, stands in connection with the last conditions of a Nature; the intermediate links themselves, however, may be unknown to us, and still lying hidden in the depths of Nature. To find out these links is the work of experimental research. Speculative physics have nothing to do but to show the need of these intermediate links;* but as every new discovery throws us back upon a new ignorance, and while one knot is being loosed a new one is being tied, it is conceivable that the complete discovery of all the intermediate links in the chain of Nature, and therefore also our science itself, is an infinite task. Nothing, however, has more impeded the infinite progress of this science than the arbitrariness of the fictions by which the want of profound insight was so long doomed to be concealed. This fragmentary nature of our knowledge becomes apparent only when we separate what is merely hypothetical from the pure out-come of science, and thereupon set out to collect the fragments of the great whole of Nature again into a system. It is, therefore, conceivable that speculative physics (the soul of real experiment) has, in all time, been the mother of all great discoveries in Nature.

V.

OF A SYSTEM OF SPECULATIVE PHYSICS GENERALLY.

Hitherto the idea of speculative physics has been deduced and developed; it is another business to show how this idea must be realized and actually carried out.

The author, for this purpose, would at

* Thus, for example, it becomes very clear through the whole course of our inquiry, that, in order to render the dynamic organization of the Universe evident in all its parts, we still lack that central phenomenon of which Bacon already speaks, which certainly lies in Nature, but has not yet been extracted from it by experiment. [*Remark of the Original.* Compare below, third note to "General Remark."

once refer to his Outlines of a System of Natural Philosophy, if he had not reason to suspect that many even of those who might consider those Outlines worthy of their attention, would come to it with certain preconceived ideas, which he has not presupposed, and which he does not desire to have pre-supposed.

The causes which may render an insight into the tendency of those Outlines difficult, are (exclusive of defects of style and arrangement) mainly, the following:

1. That many persons, misled perhaps by the word *Natural Philosophy*, expect to find transcendental deductions from natural phenomena, such as, in different fragments, exist elsewhere, and will regard natural philosophy generally as a part of transcendental philosophy, whereas it forms a science altogether peculiar, altogether different from, and independent of, every other.

2. That the notions of dynamical physics hitherto diffused, are very different from, and partially at variance with, those which the author lays down. I do not speak of the modes of representation which several persons, whose business is really mere experiment, have figured to themselves in this connection; for example, where they suppose it to be a dynamical explanation, when they reject a galvanic fluid, and accept instead of it certain vibrations in the metals; for these persons, as soon as they observe that they have understood nothing of the matter, will revert, of their own accord, to their previous representations, which were made for them. I speak of the modes of representation which have been put into philosophic heads by Kant, and which may be mainly reduced to this: that we see in matter nothing but the occupation of space in definite degrees, in all difference of matter, therefore, only mere difference of occupation of space (i. e. density,) in all dynamic (qualitative) changes, only mere changes in the relation of the repelling and attracting forces. Now, according to this mode of representation, all the phenomena of Nature are looked at only on their lowest plane, and the dynamical physics of these philosophers begin precisely at the point where they ought properly to leave off. It is indeed certain that the last result of every dynamical process is a changed degree of occupation of space—that is, a changed density; inasmuch, now, as the dynamical process of Nature is one, and the individual dynamical processes are only shreds of the one fundamental process — even magnetic and electric phenomena, viewed from this stand-point, will be, not actions of particular materials, but changes in the constitution of matter itself; and as this depends upon the mutual action of the fundamental forces, at last, changes in the relation of the fundamental forces themselves. We do not indeed deny that these phenomena at the extreme limit of their manifestation are changes in the relation of the principles themselves; we only deny that these changes are nothing more; on the contrary, we are convinced that this so-called dynammical principle is too superficial and defective a basis of explanation for all Nature's phenomena, to reach the real depth and manifoldness of natural phenomena, inasmuch as by means of it, in point of fact, no qualitative change of matter *as* such is constructible (for change of density is only the external phenomenon of a higher change). To adduce proof of this assertion is not incumbent upon us, till, from the opposite side, that principle of explanation is shown by actual fact to exhaust Nature, and the great chasm is filled up between that kind of dynamical philosophy and the empirical attainments of physics — as, for example, in regard to the very different kinds of effects exhibited by simple substances—a thing which, let us say at once, we consider to be impossible.

We may therefore be permitted, in the room of the hitherto prevailing dynamic mode of representation, to place our own without further remark—a procedure which will no doubt clearly show wherein the latter differs from the former, and by which of the two the Doctrine of Nature may most certainly be raised to a Science of Nature.

VI.

INTERNAL ORGANIZATION OF THE SYSTEM OF SPECULATIVE PHYSICS.

1.

An inquiry into the Principle of speculative physics must be preceded by inquiries into the distinction between the speculative and the empirical generally. This depends mainly upon the conviction that between empiricism and theory there is such a complete opposition that there can be no third thing in which the two may be united; that, therefore, the idea of Experimental Science is a mongrel idea, which implies no connected thought, or rather, which cannot be thought at all. What is pure empiricism is not science, and, *vice versâ*, what is science is not empiricism. This is not said for the purpose of at all depreciating empiricism, but is meant to exhibit it in its true and proper light. Pure empiricism, be its object what it may, is history (the absolute opposite of theory), and, conversely, history alone is empiricism.*

Physics, as empiricism, are nothing but a collection of facts, of accounts of what has been observed—what has happened under natural or artificial circumstances. In what we at present designate physics, empiricism and science run riot together, and for that very reason they are neither one thing nor another.

Our aim, in view of this object, is to separate science and empiricism as soul and body, and by admitting nothing into science which is not susceptible of an *à priori* construction, to strip empiricism of all theory, and restore it to its original nakedness.

The opposition between empiricism and science rests therefore upon this: that the former regards its object in *being*—as something already prepared and accomplished; science, on the other hand, views its object in *becoming*, and as something that has yet to be accomplished. As science cannot set out from anything that is a product—that is, a thing—it must set out from the unconditioned; the first inquiry of speculative physics is that which relates to the unconditioned in natural science.

2.

As this inquiry is, in the Outlines, deduced from the highest principles, the following may be regarded as merely an illustration of those inquiries:

Inasmuch as everything of which we can say that it *is*, is of a conditioned nature, it is only *being itself* that can be the unconditioned. But seeing that individual being, as a conditioned, can be thought only as a particular limitation of the productive activity (the sole and last substrate of all reality) *being itself* is *thought* as the same productive activity *in its unlimitedness*. For the philosophy of nature, therefore, nature is originally only productivity, and from this as its principle science must set out.

So long as we know the totality of objects only as the sum of being, this totality is a mere world—that is, a mere product for us. It would certainly be impossible in the science of Nature to rise to a higher idea than that of being, if all permanence (which is thought in the idea of being) were not deceptive, and really a continuous and uniform reproduction.

In so far as we regard the totality of objects not merely as a product, but at the same time necessarily as productive, it rises into *Nature* for us, and this *identity of the product and the productivity*, and this alone is implied, even in the ordinary use of language by the idea of Nature.

Nature as a mere product (*natura naturata*) we call Nature as object (with this alone all empiricism deals). Nature as productivity (*natura naturans*) we call Nature as subject (with this alone all theory deals).

As the object is never unconditioned, something absolutely non-objective must

* If only those warm panegyrists of empiricism, who exalt it at the expense of science, did not, true to the idea of empiricism, try to palm off upon us as empiricism their own judgments, and what they have put into nature, and imposed upon objects; for though many persons think they can talk about it, there is a great deal more belonging to it than many imagine—to eliminate purely the accomplished from Nature, and to state it with the same fidelity with which it has been eliminated.—*Remark of the Original.*

be put into Nature; this absolutely non-objective is nothing else but that original productivity of Nature. In the ordinary view it vanishes in the product: conversely in the philosophic view the product vanishes in the productivity.

Such identity of the product and the productivity in the original conception of Nature is expressed by the ordinary views of Nature as a whole, which is at once the cause and the effect of itself, and is in its duplicity (which goes through all phenomena) again identical. Furthermore, with this idea the identity of the Real and the Ideal agrees—an identity which is thought in the idea of every product of Nature, and in view of which alone the nature of art can be placed in opposition thereto. For whereas in art the idea precedes the act—the execution—in Nature idea and act are rather contemporary and one; the idea passes immediately over into the product, and cannot be separated from it.

This identity is cancelled by the empirical view, which sees in Nature only the effect (although on account of the continual wandering of empiricism into the field of science, we have, even in purely empirical physics, maxims which presuppose an idea of Nature as subject—as, for example, Nature chooses the shortest way; Nature is sparing in causes and lavish in effects); it is also cancelled by speculation, which looks only at *cause* in Nature.

3.

We can say of Nature as object that it *is*, not of Nature as subject; for this is being or productivity.

This absolute productivity must pass over into an empirical nature. In the idea of absolute productivity, is the thought of an ideal infinity. The ideal infinity must become an empirical one.

But empirical infinity is an infinite becoming. Every infinite series is but the exhibition of an intellectual or ideal infinity. The original infinite series (the ideal of all infinite series) is that wherein our intellectual infinity evolves itself, viz., *Time*. The activity which sustains this series is the same as that which sustains our consciousness; consciousness, however, is *continuous*. Time, therefore, as the evolution of that activity, cannot be produced by composition. Now, as all other infinite series are only imitations of the originally infinite series, Time, no infinite series can be otherwise than continuous. In the original evolution the retarding agent (without which the evolution would take place with infinite rapidity) is nothing but *original reflection*; the necessity of reflection upon our acting in every organic phase (continued duplicity in identity) is the secret stroke of art whereby our being receives *permanence*.

Absolute continuity, therefore, exists only for the intuition, but not for the *reflection*. Intuition and reflection are opposed to each other. The infinite series is continuous for the productive *intuition*—interrupted and composite for the *reflection*. It is on this *contradiction* between intuition and reflection that those sophisms are based, in which the possibility of all motion is contested, and which are solved at every successive step by the productive activity. To the intuition, for example, the action of gravity takes place with perfect continuity; to the reflection, by fits and starts. Hence all the laws of mechanics, whereby that which is properly only the object of the productive intuition becomes an object of reflection, are really only laws for the reflection. Hence those fictitious notions of mechanics, the atoms of time in which gravitation acts, the law that the moment of solicitation is infinitely small, because otherwise an infinite rapidity would be produced in finite time, &c., &c. Hence, finally, the assertion that in mathematics no infinite series can really be represented as continuous, but only as advancing by fits and starts.

The whole of this inquiry into the opposition between reflection and the productivity of the intuition, serves only to enable us to deduce the general statement that in *all* productivity, and in productivity alone, there is absolute *continuity*—a statement of importance in the consideration of the whole of Nature; inasmuch, for example, as the law that in Nature there is no leap, that there is a continuity of forms in it, &c., is confined to the orig-

inal productivity of Nature, in which certainly there must be continuity, whereas from the stand-point of reflection all things must appear *disconnected* and *without* continuity—placed beside each other, as it were; we must therefore admit that both parties are right; those, namely, who assert continuity in Nature—for example, in organic Nature—no less than those who deny it, when we take into consideration the difference of their respective stand-points; and we thereby, at the same time, arrive at the distinction between dynamical and atomistic physics; for, as will soon become apparent, the two are distinguished only by the fact that the former occupies the stand-point of *intuition*, the latter that of *reflection*.

4.

These general principles being presupposed, we shall be able, with more certainty, to reach our aim, and make an exposition of the internal organism of our system.

(*a*) In the idea of becoming, we think the idea of gradualness. But an absolute productivity will exhibit itself empirically as a becoming with infinite rapidity, whereby there results nothing real for the intuition.

(Inasmuch as Nature must in reality be thought as engaged in infinite evolution, the permanence, the resting of the products of Nature—the organic ones, for instance—is not to be viewed as an absolute resting, but only as an evolution proceeding with infinitely small rapidity or with infinite tardiness. But hitherto evolution, with even finite rapidity, not to speak of infinitely small rapidity, has not been constructed.)

(*b*) That the evolution of Nature should take place with finite rapidity, and thus become an object of intuition, is not thinkable without an original limitation (a being limited) of the productivity.

(*c*) But if Nature be absolute productivity, then the ground of this limitation may lie *outside of it*. Nature is originally *only* productivity; there can, therefore, be nothing determined in this productivity (all determination is negation) and so products can never be reached by it. If products are to be reached, the productivity must pass from being undetermined to being determined—that is, it must, as pure productivity, be cancelled. If now the ground of determination of productivity lay outside of Nature, Nature would not be originally absolutely productivity. Determination, that is, negation, must certainly come into Nature; but this negation, viewed from a higher stand-point, must again be positivity.

(*d*) But if the ground of this limitation lies *within Nature itself*, then Nature ceases to be *pure identity*. (Nature, in so far as it is only productivity, is pure identity, and there is in it absolutely nothing capable of being distinguished. In order that anything may be distinguished in it, its identity must be cancelled—Nature must not be identity, but duplicity.)

Nature must originally be an object to itself; this change of the pure subject into a self-object is unthinkable without an original sundering in Nature itself.

This duplicity cannot therefore be further deduced physically; for, as the condition of all Nature generally, it is the principle of all physical explanation, and all physical explanation can only have for its aim the reduction of all the antitheses which appear in Nature to that original antithesis in the heart of Nature, *which does not, however, itself appear*. Why is there no original phenomenon of Nature without this duplicity, if in Nature all things are not mutually subject and object to each other *ad infinitum*, and Nature even, in its origin, at once product and productive?

(*e*) If Nature is originally duplicity, there must be opposite tendencies even in the original productivity of Nature. (The positive tendency must be opposed by another, which is, as it were, anti-productive—retarding production; not as the contradictory, but as the negative—the really opposite of the former.) It is only then that, in spite of its being limited, there is no passivity in Nature, when even

that which limits it is again positive, and its original duplicity is a contest of really opposite tendencies.

(*f*) In order to arrive at a product, these opposite tendencies must concur. But as they are supposed equal, (for there is no ground for supposing them unequal,) wherever they meet they will annihilate each other; the product is therefore = 0, and once more no product is reached.

This inevitable, though hitherto not very closely remarked contradiction (namely, that a product can arise only through the concurrence of opposite tendencies, while at the same time these opposite tendencies mutually annihilate each other) is capable of being solved only in the following manner: There is absolutely no *subsistence* of a product thinkable, *without a continual process of being reproduced.* The product must be thought as *annihilated at every step*, and at *every step reproduced anew.* We do not really see the subsisting of a product, but only the continual process of being reproduced.

(It is of course very conceivable how the series 1—1+1—1..... on to infinity is thought as equal neither to 1 nor to 0. The reason however why this series is thought as =½ lies deeper. There is one absolute magnitude (=1), which, though continually annihilated in this series, continually recurs, and by this recurrence produces, not itself, but the mean between itself and nothing.—Nature, as object, is that which comes to pass in such an infinite series, and is = a fraction of the original unit, to which the never cancelled duplicity supplies the numerator.)

(*g*) If the subsistence of the product is a continual process of being reproduced, then all *persistence* also is only in nature as *object*; in nature as *subject* there is only infinite *activity.*

The product is originally nothing but a mere point, a mere limit, and it is only from Nature's combatting against this point that it is, so to speak, raised to a full sphere—to a product. (Suppose, for illustration, a stream; it is *pure identity*; where it meets resistance, there is formed a whirlpool; this whirlpool is not anything abiding, but something that every moment vanishes, and every moment springs up anew.—In Nature there is originally nothing distinguishable; all products are, so to speak, still in solution, and invisible in the universal productivity. It is only when retarding points are given, that they are thrown off and advance out of the universal identity.—At every such point the stream breaks (the productivity is annihilated), but at every step there comes a new wave which fills up the sphere).

The philosophy of nature has not to explain the productive (side) of nature; for if it does not posit this as in nature originally, it will never bring it into nature. It has to explain the permanent. But the fact *that* anything should become permanent in nature, can itself receive its explanation only from that contest of nature *against all permanence.* The products would appear as mere points, if nature did not give them extension and depth by its own pressure, and the products themselves would last only an instant, if nature did not at every instant crowd up against them.

(*h*) This seeming product, which is reproduced at every step, cannot be a really infinite product; for otherwise productivity would actually exhaust itself in it; in like manner it cannot be a finite product; for it is the force of the whole of nature that pours itself into it. It must therefore be at once infinite and finite; it must be only seemingly finite, but in infinite development.

The point at which this product originally comes in, is the universal point of retardation in nature, the point from which all evolution in nature begins. But in nature, as it is evolved, this point lies not here or there, but everywhere where there is a product.

This product is a finite one, but as the infinite productivity of nature concentrates itself in it, it must have a tendency to infinite development.—And thus gradually, and through all the foregoing intermediate links, we have arrived at the construction of that infinite becoming—the empirical exhibition of an ideal infinity.

We behold in what is called nature (i. e. in this assemblage of individual objects), not the primal product itself, but its evolution, (hence the point of retardation cannot remain *one*.)—By what means *this* evolution is again absolutely retarded, which must happen, if we are to arrive at a fixed product, has not yet been explained.

But through this product an original infinity evolves itself; this infinity can never decrease. The magnitude which evolves itself in an infinite series, is still infinite at every point of the line; and thus nature will be still infinite at every point of the evolution.

There is only one original point of retardation to productivity; but any number of points of retardation to evolution may be thought. Every such point is marked for us by a product: but at every point of the evolution nature is still infinite; therefore nature is still infinite in every product, and in every one lies the germ of a universe.*

(The question, by what means the infinite tendency is retarded in the product, is still unanswered. The original retardation in the productivity of nature, explains only why the evolution takes place with finite rapidity, but not why it takes place with infinitely small rapidity.)

(*i*) The product evolves itself *ad infinitum*. In this evolution, therefore, nothing can happen, which is not already a product (synthesis), and which might not divide up into new factors, each of these again having its factors.

Thus even by an analysis pursued *ad infinitum*, we could never arrive at anything in nature which should be absolutely simple.

(*k*) If however we *suppose* the evolution as completed, (although it *never* can be completed,) still the evolution could not stop at anything which was a product, but only at the purely productive.

The question arises, whether a final, such that it is no longer a substrate, but the cause of all substrate, no longer a product, but absolutely productive—we will not say *occurs*, for that is unthinkable, but—can at least be proved in experience.

(*l*) Inasmuch as it bears the character of the unconditioned, it would have to exhibit itself as something, which, although itself not in space, is still the principle of all occupation of space.

What occupies space is not matter, for matter is the occupied space itself. That, therefore, which occupies space cannot be matter. Only that which is, is in space, not *being itself*.

It is self-evident that no positive external intuition is possible of that which *is* not in space. It would therefore have to be capable of being exhibited negatively. This happens in the following manner:

That which is in space, is, as such, mechanically and chemically destructible. That which is not destructible either mechanically or chemically must therefore lie outside of space. But it is only the final ground of all quality that has anything of this nature; for although one quality may be extinguished by another, this can nevertheless only happen in a third product, C, for the formation and maintenance of which A and B, (the opposite factors of C,) must continue to act.

But this indestructible (somewhat), which is thinkable only as pure intensity, is, as the cause of all substrate, at the same time the principle of divisibility *ad infinitum*. (A body, divided *ad infinitum* still occupies space in the same degree with its smallest part.)

That, therefore, which is purely productive without being a product, is but the final ground of quality. But every quality is a determinate one, whereas productivity is originally indeterminate. In the qualities, therefore, productivity appears as already retarded, and as it appears most original in them generally, it appears in them most originally retarded.

* A traveller in Italy makes the remark that the whole history of the world may be demonstrated on the great obelisk at Rome; so, likewise, in every product of Nature. Every mineral body is a fragment of the annals of the earth. But what is the earth? Its history is interwoven with the history of the whole of Nature, and so passes from the fossil through the whole of inorganic and organic Nature, till it culminates in the history of the universe—one chain.—*Remark of the Original.*

This is the point at which our mode of conception diverges from those of the currently so-called dynamical physics.

Our assertion, briefly stated, is this:—If the infinite evolution of nature were completed (which is impossible) it would separate up into original and simple actions, or, if we may so express ourselves, into simple productivities. Our assertion therefore is not: There are in nature such simple actions; but only, they are the ideal grounds of the explanation of quality. These *entelechies* cannot actually be shown, they do not *exist;* we have not therefore to explain here anything more than is asserted, namely, that such original productivities must be *thought* as the grounds of the explanation of all quality. This proof is as follows:

The affirmation that nothing which *is* in space, that is, that nothing at all is mechanically simple, requires no demonstration. That, therefore, which is in reality simple, cannot be thought as in space, but must be thought as outside of space. But outside of space only pure intensity is thought. This idea of pure intensity is expressed by the idea of action. It is not the product of this action that is simple, but the action itself abstracted from the product, and it must be simple in order that the product may be divisible *ad infinitum*. For although the parts are near vanishing, the intensity must still remain. And this pure intensity is what, even in infinite divisibility, sustains the substrate.

If, therefore, the assertion that affirms something simple as the basis of the explanation of quality is atomistic, then our philosophy is atomistic. But, inasmuch as it places the simple in something that is only productive without being a product, it is *dynamical atomistics*.

This much is clear, that if we admit an absolute division of nature into its factors, the last (thing) that remains over, must be something, which absolutely defies all division, that is, the simple. But the simple can be thought only as dynamical, and as such it is not in space at all (it designates only what is thought as altogether outside of space-occupation); there is therefore no intuition of it possible, except through its product. In like manner there is no measure for it given but its product. For to pure thought it is the mere *origin* of the product (as the point is only the origin of the line), in one word pure *entelechy*. But that which is known, not in itself, but only in its product, is known altogether empirically. If, therefore, every original quality, as quality (not as substrate, in which quality merely inheres), must be thought as pure intensity, pure action, then qualities generally are only the absolutely empirical in our knowledge of nature, of which no construction is possible, and in respect to which there remains nothing of the philosophy of nature, save the proof that they are the absolute limit of its construction.

The question in reference to the ground of quality posits the evolution of nature as completed, that is, it posits something merely thought, and therefore can be answered only by an ideal ground of explanation. This question adopts the standpoint of reflection (on the product), whereas genuine dynamics always remain on the stand-point of intuition.

(It must here, however, be at once remarked that if the ground of the explanation of quality is conceived as an ideal one, the question only regards the explanations of quality, in so far as it is thought as absolute. There is no question, for instance, of quality, in so far as it shows itself in the dynamical process. For quality, so far as it is relative, there is certainly a [not merely ideal, but actually real] ground of explanation and determination; quality in that case is determined by its opposite, with which it is placed in conflict, and this antithesis is itself again determined by a higher antithesis, and so on back into infinity; so that, if this universal organization could dissolve itself, all matter likewise would sink back into dynamical inactivity, that is, into absolute defect of quality. (Quality is a higher power of matter, to which the latter elevates itself by reciprocity.) It is demonstrated in the sequel that the dynamical process is a limited one for each individual sphere; because it is only thereby that definite points of relation for the determ-

ination of quality arise. This limitation of the dynamical process, that is, the proper determination of quality, takes place by means of no force other than that by which the evolution is universally and absolutely limited, and this negative element is the only one in things that is indivisible, and mastered by nothing.—The absolute relativity of all quality may be shown from the electric relation of bodies, inasmuch as the same body that is positive with one is negative with another, and conversely. But we might now henceforth abide by the statement (which is also laid down in the Outlines): *All quality is electricity,* and conversely, *the electricity of a body is also its quality,* (for all difference of quality is equal to difference of electricity, and all [chemical] quality is reducible to electricity).—Everything that is sensible for us (sensible in the narrower acceptation of the term, as colors, taste, &c.), is doubtless sensible to us only *through* electricity, and the only *immediately* sensible (element) would then be electricity,* a conclusion to which the universal duality of every sense leads us independently, inasmuch as in Nature there is properly only one duality. In galvanism, sensibility, as a reagent, reduces all quality of bodies, for which it is a reagent to an original difference. All bodies which, in a chain, at all affect the sense of taste or that of sight, be their differences ever so great, are either alkaline or acid, excite a negative or positive shock, and here they always appear as active in a higher than the merely chemical power.

Quality considered as absolute is inconstructible, because quality generally is not anything absolute, and there is no other quality at all, save that which bodies show mutually in relation to each other, and all quantity is something in virtue of which the body is, so to speak, raised above itself.

All hitherto attempted construction of quality reduces itself to the two attempts; to express qualities by figures, and so, for each original quality, to assume a particular figure in Nature; or else, to express quality by analytical formulæ (in which the forces of attraction and repulsion supply the negative and positive magnitudes.) To convince oneself of the futility of this attempt, the shortest method is to appeal to the emptiness of the explanations to which it gives rise. Hence we limit ourselves here to the single remark, that through the construction of all matter out of the two fundamental forces, different degrees of density may indeed be constructed, but certainly never different qualities as qualities; for although all dynamical (qualitative) changes appear, in their lowest stage, as changes of the fundamental forces, yet we see at that stage only the product of the process—not the *process itself*—and those changes are *what require explanation,* and the ground of explanation must therefore certainly be sought in something higher.

The only possible ground of explanation for quality is an ideal one; because this ground itself presupposes something purely ideal. If any one inquire into the final ground of quality, he transports himself back to the starting point of Nature. But where is this starting point? and does not all quality consist in this, that matter is prevented by the general concatenation from reverting into its originality?

From the point at which reflection and intuition separate, a separation, be it remarked, which is possible only on the hypothesis of the evolutions being complete, physics divide into the two opposite directions, into which the two systems, the atomistic and the dynamical, have been divided.

The *dynamical* system *denies* the absolute evolution of Nature, and passes from Nature as synthesis (i. e. Nature as subject) to Nature as evolution (i. e. Nature as object); the atomistic system passes from the evolution, as the original, to Nature as synthesis; the former passes from the stand-point of intuition to that of reflection; the latter from the stand-point of reflection to that of intuition.

* Volta already asks, with reference to the affection of the senses by galvanism—"Might not the electric fluid be the immediate cause of all flavors? Might it not be the cause of sensation in all the other senses?"—*Remark of the Original.*

Both directions are equally possible. If the analysis only is right, then the synthesis must be capable of being found again through analysis, just as the analysis in its turn can be found through the synthesis. But whether the analysis is correct can be tested only by the fact that we can pass from it again to the synthesis. The synthesis therefore is, and continues, the absolutely presupposed.

The problems of the one system turn exactly round into those of the other; that which, in atomical physics, is the cause of the *composition* of Nature is, in dynamical physics, *that which checks evolution*. The former explains the composition of Nature by the force of cohesion, whereby, however, no continuity is ever introduced into it; the latter, on the contrary, explains cohesion by the continuity of evolution. (All cohesion is originally only in the productivity.)

Both systems set out from something purely ideal. Absolute synthesis is as much purely *ideal* as absolute analysis. The Real occurs only in Nature as *product*; but Nature is not product, either when thought as absolute involution or as absolute evolution; product is what is contained between the two extremes.

The first problem for both systems is to construct the product—i. e. that wherein those opposites become real. Both reckon with purely *ideal* magnitudes so long as the product is not constructed: it is only in the *directions* in which they accomplish this that they are opposed. Both systems, as far as they have to deal with merely ideal factors, have the same value, and the one forms the test of the other.—That which is concealed in the depths of productive Nature must be reflected as product in Nature as Nature, and thus the atomistic system must be the continual reflex of the dynamical. In the Outlines, of the two directions, that of atomistic physics has been chosen intentionally. It will contribute not a little to the understanding of our science, if we here demonstrate in the *productivity* what was there shown in the *product*.

(*m*) *In the pure productivity of Nature there is absolutely nothing distinguishable except duality; it is only productivity dualized in itself that gives the product.*

Inasmuch as the absolute productivity arrives only at producing *per se*, not at the producing of a determinate [somewhat], the tendency of Nature, in virtue of which product is arrived at, must be the *negative* of productivity.

In Nature, in so far as it is real, there can no more be productivity without a product, than a product without productivity. Nature can only approximate to the two extremes, and it must be demonstrated *that* it approximates to both.

(*a*) *Pure 'productivity passes originally into formlessness.*

Wherever Nature loses itself in formlessness, productivity exhausts itself in it. (This is what we express when we talk of a becoming latent.)—Conversely, wherever the form predominates—i. e. wherever the productivity is *limited*—the productivity manifests itself; it appears, not as a (representable) product, but *as* productivity, although passing over into one product, as in the phenomena of heat. (The idea of imponderables is only a symbolic one.)

(*b*) *If productivity passes into formlessness, then, objectively considered, it is the absolutely formless.*

(The boldness of the atomical system has been very imperfectly comprehended. The idea which prevails in it, of an absolutely formless [somewhat] everywhere incapable of manifestation as determinate matter, is nothing other than the symbol of nature approximating to productivity.—The nearer to productivity the nearer to formlessness.

(*y*) *Productivity appears as productivity only when limits are set to it.*

That which is everywhere and in everything, is, for that very reason, nowhere.—Productivity is fixed only by limitation.—*Electricity exists* only at that point at which limits are given, and it is only a poverty of conception that would look for anything else in its phenomena beyond the phenomena of (limited) productivity.—The condition of *light* is an antithesis in the electric and galvanic, as well as in the chemical, process, and even light which comes to us without our coöpera-

tion (the phenomenon of productivity exerted all round by the sun) presupposes that antithesis.*

(δ) *It is only limited productivity that gives the start to product.* (The explanation of product must begin at the origination of the fixed point at which the start is made.) *The condition of all formation is duality.* (This is the more profound signification that lies in Kant's construction of matter from opposite forces.)

Electrical phenomena are the general scheme for the construction of matter universally.

(ε) *In Nature, neither pure productivity nor pure product can ever be arrived at.*

The former is the negation of all product, the latter the negation of all productivity.

(Approximation to the former is the absolutely decomposible, to the latter the absolutely indecomposible, of the atomistics. The former cannot be thought without, at the same time, being the absolutely incomposible, the latter without, at the same time, being the absolutely composible.)

Nature will therefore originally be the middle [somewhat] arising out of the two, and thus we arrive at the idea of *a productivity engaged in a transition into product, or of a product that is productive ad infinitum.* We hold to the latter definition.

The idea of the product (the fixed) and that of the productive (the free) are mutually opposed.

Seeing that what we have postulated is already product, it can, if it is productive at all, be productive only in a *determinate way.* But determined productivity is (active) *formation.* That third [somewhat] must therefore be *in the state of formation.*

But the product is supposed to be productive *ad infinitum* (that transition is never absolutely to take place); it will therefore at every stage be productive in a determinate way; the productivity will remain, but not the product.

(The question might arise how a transition from form to form is possible at all here, when *no* form is fixed. Still, that *momentary* forms should be reached, has already been rendered possible by the fact that the evolution cannot take place with infinite rapidity, in which case, therefore, for every step at least, the form is certainly a determinate one.)

The product will appear as in *infinite metamorphosis.*

(From the stand-point of reflection, as continually on the leap from fluid to solid, without ever reaching, however, the required form.—Organizations that do not live in the grosser element, at least live on the deep ground of the aërial sea—many pass over, by metamorphoses, from one element into another; and what does the animal, whose vital functions almost all consist in contractions, appear to be, other than such a leap?)

The metamorphosis will not possibly take place *without rule.* For it must remain within the original antithesis, and is thereby confined within limits.†

(This accordance with rule will express itself solely by an internal relationship of forms—a relationship which again is not thinkable without an archetype which lies at the basis of all, and which, with however manifold divergences, they nevertheless all express.

But even with such a product, we have not that which we were in quest of—a product which, while productive *ad infinitum*, remains *the same.* That this product should remain the same seems unthinkable, because it is not thinkable without an absolute checking or suppression of the productivity.—The product would have to be checked, as the productivity was checked, for it is still productive—checked

* According to the foregoing experiments, it is at least not impossible to regard the phenomena of light and those of electricity as one, since in the prismatic spectrum the colors *may* at least be considered as opposites, and the white light, which regularly falls in the middle, be regarded as the indifference-point; and for reasons of analogy one is tempted to consider *this* construction of the phenomena of light as the real one.—*Remark of the Original.*

† Hence wherever the antithesis is cancelled or deranged, the metamorphosis becomes irregular. For what is disease even but metamorphosis?—*Remark of the Original.*

by dualization and limitation resulting therefrom. But it must at the same time be explained how the productive product can be checked at each individual stage of its formation, without its ceasing to be productive, or how, *by dualization itself, the permanence of the productivity is secured.*

In this way we have brought the reader as far as the problem of the fourth section of the Outlines, and we leave him to find in it for himself the solution along with the corollaries which it brings up.—Meanwhile, we shall endeavor to indicate how the deduced product would necessarily appear from the stand-point of *reflection.*

The product is the synthesis wherein the opposite extremes meet, which on the one side are designated by the absolutely decomposible—on the other as indecomposible.—How continuity comes into the absolute discontinuity with which he sets out, the atomic philosopher endeavors to explain by means of cohesive, plastic power, &c., &c. In vain, for continuity is only *productivity* itself.

The manifoldness of the forms which such product assumes in its metamorphosis was explained by the difference in the stages of development, so that, parallel with every step of development, goes a particular form. The atomic philosopher posits in nature certain fundamental forms, and as in it everything strives after form, and every thing which does form itself has also its *particular* form, so the fundamental forms must be conceded, but certainly only as indicated in nature, not as actually existent.

From the standpoint of reflection, the becoming of this product must appear as a continual striving of the original actions toward the production of a determinate form, and a continual recancelling of those forms.

Thus, the product would not be product of a simple tendency; it would be only the visible expression of an internal proportion, of an internal equipoise of the original actions, which neither reduce themselves mutually to absolute formlessness, nor yet, by reason of the universal conflict, allow the production of a determinate and fixed form.

Hitherto (so long as we have had to deal merely with ideal factors), there have been opposite directions of investigation possible; from this point, inasmuch as we have to pursue a real product in its developments, there is only one direction.

(*n*) By the unavoidable separation of productivity into opposite directions at every single step of development the product itself is separated into *individual products,* by which, however, for that very reason, only different stages of development are marked.

That this is so may be shown *either* in the products themselves, as is done when we compare them with each other with regard to their form, and search out a continuity of formation—an idea which, from the fact that continuity is never in the *products* (for the reflection), but always only in the *productivity,* can never be perfectly realized.

In order to find continuity in productivity, the successive steps of the *transition of productivity into product* must be more clearly exhibited than they have hitherto been. From the fact that the productivity gets *limited,* (*v. supra,*) we have in the first instance only the start for a product, only the fixed point for the productivity generally. It must be shown *how* the productivity gradually materializes itself, and changes itself into products ever more and more fixed, so as to produce a *dynamical scale in nature,* and this is the real subject of the fundamental problem of the whole system.

In advance, the following may serve to throw light on the subject. In the first place, a dualization of the productivity is demanded; the cause through which this dualization is effected remains in the first instance altogether outside of the investigation. By dualization a change of contraction and expansion is perhaps conditioned. This change is not something in matter, but is *matter itself,* and the first stage of productivity passing over into product. *Product* cannot be reached except through a stoppage of this change, that is, through a third [somewhat] which

fixes that change itself, and thus matter in its lowest stage—in the *first* power—would be an object of intuition; that change would be seen in rest, or in equipoise, just as, conversely again, by the suppression of the third [somewhat] matter might be raised to a higher power. Now it might be possible that those products just deduced stood upon *quite different degrees* of materiality, or of *that transition*, or that those different degrees were more or less *distinguishable* in the one than in the other; that is, a dynamical scale of those products would thereby have to be demonstrated.

(*o*) In the *solution* of the problem itself, we shall continue, in the first instance, in the direction hitherto taken, without knowing where it may lead us.

There are individual products brought into nature; but in these products productivity, *as* productivity, is held to be still always distinguishable. Productivity has not yet absolutely passed over into product. The subsistence of the product is supposed to be a continual self-reproduction.

The problem arises: By what is this absolute transition—exhaustion of the productivity in the product—prevented? or by what does its subsistence become a continual self-reproduction?

It is absolutely unthinkable how the activity that everywhere tends towards a product is prevented from going over into it *entirely*, unless that transition is prevented *by external influences*, and the product, if it is to subsist, is compelled at every step to reproduce itself *anew*.

Up to this point, however, no trace has been discovered of a cause opposed to the product (to organic nature). Such a cause can, therefore, at present, only be postulated. (We thought we saw the whole of nature exhaust itself in that product, and it is only here that we remark, that in order to comprehend such product, *something else* must be presupposed, and a new antithesis must come into nature.

Nature has hitherto been for us absolute *identity* in duplicity; here we come upon an antithesis that must again take place *within* the other. This antithesis must be capable of being shown in the deduced product itself, if it is capable of being deduced at all.)

The deduced product is an activity *directed outwards*; this cannot be distinguished as such without an activity *directed inwards from without*, (i. e. directed upon itself,) and this activity, on the other hand, cannot be thought, unless it is *pressed back* (reflected) from without.

In the opposite directions, which arise through this antithesis lies the principle for the construction of all the phenomena of life—on the suppression of those opposite directions, life remains over, either as *absolute activity* or *absolute receptivity*, since it is possible only as the perfect *inter-determination* of receptivity and activity.

We therefore refer the reader to the Outlines themselves, and merely call his attention to the higher stage of construction which we have here reached.

We have above (*g*) explained the origin of a *product generally* by a struggle of nature against the original point of check, whereby this point is raised to a full sphere, and thus receives permanence. Here, since we are deducing a struggle of *external* nature, not against a mere point, but against a *product*, the first construction rises for us to a *second* power, as it were,—we have a double product, (and thus it might well be shown in the sequel that organic nature generally is only the higher power of the inorganic, and that it rises above the latter for the very reason that in it even that which was already product *again* becomes product.

Since the product, which we have deduced as the most primary, drives us to a side of nature that is opposed to it, it is clear that our construction of the origin of a product generally is *incomplete*, and that we have not yet, by a long way, satisfied our problem; (the problem of all science is to construct the origin of a fixed product.)

A productive product, as such, can subsist only under the influence of external forces, because it is only thereby that productivity is interrupted—prevented from being extinguished in the product. For these external forces there must now again

be a particular sphere; those forces must lie in a world which is *not productive*. But that world, for this very reason, would be a world fixed and undetermined in every respect. The problem — how a product in nature is arrived at — has therefore received a one-sided solution by all that has preceded. "The product is checked by dualization of the productivity at every single step of development." But this is true only for the *productive* product, whereas we are here treating of a *non-productive* product.

The contradiction which meets us here can be solved only by the finding of a *general* expression for the construction of a *product generally*, (regardless of whether it is productive or has ceased to be so).

Since the existence of a world, that is *not productive* (inorganic) is in the first instance merely postulated, in order to explain the productive one, so its conditions can be laid down only hypothetically, and as we do not in the first instance know it at all except from its opposition to the productive, those conditions likewise must be deduced only from this opposition. From this it is of course clear, —what is also referred to in the Outlines— that this second section, as well as the first, contains throughout merely hypothetical truth, since neither organic nor inorganic nature is explained without our having reduced the construction of the two to a common expression, which, however, is possible only through the synthetic part.—This must leadto the highest and most general principles for the construction of a *nature* generally; hence we must refer the reader who is concerned about a knowledge of our system altogether to that part. The hypothetical deduction of an inorganic world and its conditions we may pass over here all the more readily, that they are sufficiently detailed in the Outlines, and hasten to the most general and the highest problem of our science.

The most general problem of speculative physics may now be expressed thus: *To reduce the construction of organic and inorganic products to a common expression.*

We can state only the main principles of such a solution, and of these, for the most part, only such as have not been completely educed in the Outlines themselves—(3d principal section.)

A.

Here at the very beginning we lay down the principle that *as the organic product is the product in the second power, the* ORGANIC *construction of the product* must be, *at least, the sensuous image of the* ORIGINAL *construction of all product.*

(*a*) In order that the productivity may be at all fixed at a point, *limits must be given.* Since *limits* are the condition of the first phenomenon, the cause whereby limits are produced *cannot be a phenomenon*, it goes back into the interior of nature, or of each respective product.

In organic nature, this limitation of productivity is shown by what we call sensibility, which must be thought as the first condition of the construction of the organic product.

(*b*) The immediate effect of confined productivity is a *change of contraction and expansion* in the matter already given, and as we now know, constructed, as it were, for the second time.

(*c*) Where this change stops, productivity passes over into product, and where it is again restored, product passes over into productivity. For since the product must remain productive *ad infinitum, those three stages of productivity* must be *capable of being* DISTINGUISHED in the product; the absolute transition of the latter into product is the cancelling of product itself.

(*d*) As these three stages are distinguishable in the *individual*, so they must be distinguishable in *organic nature throughout*, and the scale of organizations is nothing more than a scale of *productivity itself.* (Productivity exhausts itself to degree *c* in the product *A*, and can begin with the product *B* only at the point where it left off with *A*, that is, with degree *d*, and so on downwards to the *vanishing* of all productivity. If we knew the absolute *degree* of productivity of the *earth* for example—a degree which is determined by the earth's

relation to the sun—the limit of organization upon it might be thereby more accurately determined than by incomplete experience—which must be incomplete for this reason, if for no other, that the catastrophes of nature have, beyond doubt, swallowed the last links of the chain. A true system of Natural History, which has for its object not the *products* [of nature] but *nature itself*, follows up the one productivity that battles, so to speak, against freedom, through all its windings and turnings, to the point at which it is at last compelled to perish in the product.)

It is upon this dynamical scale, in the individual, as well as in the whole of organic nature, that the construction of all organic phenomena rests.

B.*

These principles, stated universally, lead to the following fundamental principles of a universal theory of nature.

(*a*) Productivity must be *primarily* limited. Since *outside* of limited productivity there is [only] *pure identity* the limitation cannot be established by a difference already existing, and therefore must be so by an *opposition* arising in *productivity itself*—an opposition to which we here revert as a first postulate.†

(*b*) This difference thought *purely* is the first condition of all [natural] activity, the productivity is attracted and repelled‡ between opposites (the primary limits); in this change of expansion and contraction there arises necessarily a common element, but one which exists only *in change*. If it is to exist *outside* of change, then the *change itself* must become fixed. The *active* in change is the productivity sundered within itself.

(*c*) It is asked:

(*α*) By what means such change can be fixed at all; it cannot be fixed by anything that is contained as a link in change itself, and must therefore be fixed by a *tertium quid*.

(*β*) But this *tertium quid* must be able to *invade* that original antithesis; but *outside* of that antithesis nothing *is**; it (that *tertium quid*) must therefore be primarily contained in it, as something which is mediated by the antithesis, and by which in turn the antithesis is mediated; for otherwise there is no ground why it should be primarily contained in that antithesis.

The antithesis is dissolution of identity. But nature is *primarily* identity. *In* that antithesis, therefore, there must again be a struggle after identity. This struggle is immediately conditioned *through* the antithesis; for if there was no antithesis, there would be identity, absolute rest, and therefore no *struggle* toward identity. If, on the other hand, there were not identity in the antithesis, the antithesis itself could not endure.

Identity produced out of difference is indifference; that *tertium quid* is therefore a *struggle towards indifference*—a struggle which is conditioned by the difference itself, and by which it, on the other hand, is conditioned.—(The difference must not be looked upon as a difference at all, and is nothing for the intuition, except through a third, which sustains it—to which change itself adheres.)

This *tertium quid*, therefore, is all that is substrate in that primal change. But substrate posits change as much as change posits substrate; and there is here no first and no second; but difference and struggle towards indifference, are, as far time is concerned, one and contemporary.

Axiom. No identity in Nature is absolute, but all is only indifference.

Since that *tertium quid* itself *presupposes* the primary antithesis, the antithesis

* From this point onwards, there are, as in the Outlines, additions in notes (similar to the few that have already been admitted into the text in brackets [ ]). They are excerpted from a MS. copy of the author's.

† The first postulate of natural science is an antithesis in the pure identity of Nature. This antithesis must be thought quite purely, and not with any other substrate besides that of activity; for it is the condition of all substrate. The person who cannot think activity or opposition without a substrate, cannot philosophize at all. For all philosophizing goes only to the deduction of a substrate.

‡ The phenomena of electricity show the scheme of nature oscillating between productivity and product. This condition of oscillation or change, attractive and repulsive force, is the real condition of formation.

* For it is the only thing that is given us to derive all other things from.

itself cannot be *absolutely* removed by it; *the condition of the continuance of that tertium quid* [of that third activity, or of Nature] *is the perpetual continuance of the antithesis,* just as, conversely, *the continuance of the antithesis is conditioned by the continuance of the tertium quid.*

But how, then, shall the antithesis be thought as continuing?

We have one primary antithesis, between the limits of which all Nature must lie; if we assume that the factors of this antithesis can really pass over into each other, or go together absolutely in some *tertium quid* (some individual product), then the antithesis is removed, and along with it the *struggle,* and so all the activity of nature. But that the antithesis should endure, is thinkable only by its being *infinite*—by the extreme limits being held asunder *in infinitum—so that always only the mediating links of the synthesis, never the last and absolute synthesis itself, can be produced,* in which case it is only *relative points of indifference* that are always attained, never absolute ones, and every successively originated difference leaves behind a new and still unremoved antithesis, and this again goes over into indifference, which, in its turn, *partially* removes the primary antithesis. Through the original antithesis and the struggle towards indifference, there arises a product, but the product partially does away with the antithesis; through the doing away of that part—that is, through the origination of the product itself—there arises a new antithesis, different from the one that has been done away with, and through it, a product different from the first; but even this leaves the absolute antithesis unremoved, duality therefore, and through it a product, will arise anew, and so on to infinity.

Let us say, for example, that by the product *A*, the antitheses *c* and *d* are united, the antitheses *b* and *e* still lie outside of that union. This latter is done away with in *B*, but this product also leaves the antithesis *a* and *f* unremoved; if we say that *a* and *f* mark the extreme limits, then the union of these will be that product which can never be arrived at.

Between the extremes *a* and *f*, lie the antitheses *c* and *d*, *b* and *e*; but the series of these intermediate antitheses is infinite; all these intermediate antitheses are included in the one absolute antithesis.—In the product *A*, of *a* only *c*, and of *f* only *d* is removed; let what remains of *a* be called *b*, and of *f*, *e*; these will indeed, by virtue of the absolute struggle towards indifference, become again united, but they leave a new antithesis uncancelled, and so there remains between *a* and *f* an infinite series of intermediate antitheses, and the product in which those absolutely cancel themselves never *is*, but only *becomes*.

This infinitely progressive formation must be thus represented. The original antithesis would necessarily be cancelled in the primal product *A*. The product would necessarily fall at the indifference-point of *a* and *f*, but inasmuch as the antithesis is an absolute one, which can be cancelled only in an infinitely continued, never actual, synthesis, *A* must be thought as the centre of an infinite periphery, (whose diameter is the infinite line *a f*.) Since in the product of *a* and *f*, only *c* and *d* are united, there arises in it the new division *b* and *e*, the product will therefore divide up into opposite directions; at the point where the struggle towards indifference attains the preponderance, *b* and *e* will combine and form a new product different from the first—but between *a* and *f*, there still lie an infinite number of antitheses; the indifference-point *B* is therefore the centre of a periphery which is comprehended in the first, but is itself again infinite, and so on.

The antithesis of *b* and *e* in *B* is *maintained* through *A*, because it (*A*) leaves the antithesis *un-united;* in like manner the antithesis in *C* is *maintained* through *B*, because *B*, in its turn, cancels only a part of *a* and *f*. But the antithesis in *C* is maintained through *B*, only in so far as *A* maintains the antithesis in *B*.* What

* The whole of the uncancelled antithesis of *A* is carried over to *B*. But again, it cannot entirely cancel itself in *B*, and is therefore carried over to *C*. The antithesis in *C* is therefore maintained by *B*, but only in so far as *A* maintains the antithesis which is the condition of *B*.

therefore in *C* and *B* results *from* this antithesis—[suppose, for example, the result of it were universal gravitation]—*is occasioned* by the common influence of *A*, so that *B* and *C*, and the infinite number of other products that come, as intermediate links between *a* and *f*, are, in relation to *A*, only *one* product.—The *difference*, which remains over in *A* after the union of *c* and *d*, is only *one*, into which then *B*, *C*, &c., again divide.

But the continuance of the antithesis is, in the case of every product, the condition of the struggle towards indifference, and thus a struggle towards indifference is maintained through *A* in *B*, and through *B* in *C*.—But the antithesis which *A* leaves uncancelled, is only one, and therefore also this tendency in *B*, in *C*, and so on to infinity, is only conditioned and maintained through *A*.

The organization thus determined is no other than the organization of the Universe in the system of gravitation.—*Gravity is simple*, but its *condition* is duplicity.—Indifference arises only out of difference.—The cancelled duality is matter, inasmuch as it is only mass.

The *absolute* indifference-point exists nowhere, but is, as it were, divided among several *single* points.—The Universe which forms itself from the centre towards the periphery, *seeks* the point at which even the extreme antitheses of nature cancel themselves; the impossibility of this cancelling guarantees the infinity of the Universe.

From every product *A*, the uncancelled antithesis is carried over to a new one, *B*, the former thereby becoming the cause of duality and gravitation for *B*.—(This carrying over is what is called action by distribution, the theory of which receives light only at this point.*)—Thus, for example, the sun, being only *relative* indifference, maintains, as far as its sphere of action reaches, the antithesis, which is the condition of weight upon the subordinate world-bodies.†

The indifference is cancelled at every step, and at every step it is restored. Hence, weight acts upon a body at rest as well as upon one in motion.—The universal restoration of duality, and its recancelling at every step, can [that is] appear only as a *nisus* against a third (somewhat). This third (somewhat) is therefore the pure zero—abstracted from tendency it is nothing [= 0], therefore purely ideal, (marking only direction)—a *point*.‡ Gravity [the centre of gravity] is in the case of every total product only *one* [for the antithesis is one], and so also the relative indifference-point is only *one*. The indifference-point of the *individual* body marks only the line of direction of its tendency towards the universal indifference-point; hence this point may be regarded as the only one at which gravity acts; just as that, whereby bodies alone attain consistence for us, is simply this tendency outwards.§

Vertical falling towards this point is not a simple, but a compound motion, and it is a subject for wonder that this has not been perceived before.‖

Gravity is not proportional to mass (for

* That is, distribution exists only, when the antithesis in a product is not absolutely but only relatively cancelled.

† The struggle towards indifference attains the preponderance over the antithesis, at a greater or less distance from the body which exercises the distribution, (as, for example, at a certain distance, the action by distribution, which an electric or magnetic body exercises upon another body, appears as cancelled.) The difference in this distance is the ground of the difference of world-bodies in one and the same system, inasmuch, namely, as one part of the matter is subjected to indifference more than the rest. Since, therefore, the condition of all product is difference, difference must again arise at every step as the source of all existence, but must also be thought as again cancelled. By this continual reproduction and resuscitation creation takes place anew at every step.

‡ It is precisely zero to which Nature continually strives to revert, and to which it would revert, if the antithesis were ever cancelled. Let us suppose the original condition of Nature=0 (want of reality). Now zero can certainly be thought as dividing itself into 1—1 (for this = 0); but if we posit that this division as not infinite (as it is in the infinite series 1—1+1—1 ·····), then Nature will as it were oscillate continually between zero and unity—and this is precisely its condition.

§ Baader on the Pythagorean Square. 1798. (*Remark of the original.*)

‖ Except by the thoughtful author of a review of my work on the world-soul, in the Würzburg *Gelehrte Anzeiger*, the only review of that work that has hitherto come under my notice. (*Remark of the original.*)

what is this mass but an abstraction of the specific gravity which you have hypostatized?); but, conversely, the mass of a body is only the expression of the momentum, with which the antithesis in it cancels itself.

(*d*) By the foregoing, the construction of matter in general is completed, but not the construction of specific difference in matter.

That which all the matter of *B*, *C*, &c., in relation to *A* has *common* under it, is the difference which is not cancelled by *A*, and which again cancels itself *in part* in *B* and *C*—hence, therefore, the gravity mediated by that difference.

What *distinguishes B* and *C* from *A* therefore, is the difference which is not cancelled by *A*, and which becomes the condition of gravity in the case of *B* and *C*.—Similarly, what distinguishes *C* from *B* (if *C* is a product subordinate to *B*), is the difference which is not cancelled by *B*, and which is again carried over to *C*. Gravity, therefore, is not the same thing for the higher and for the subaltern world-bodies, and there is as much variety in the central forces as in the conditions of attraction.

The means whereby, in the products *A*, *B*, *C*, which, in so far as they are opposed to *each other*, represent products absolutely *homogeneous* [because the antithesis is the same for the *whole product*,] another difference of individual products is possible, is the possibility of a difference of relation between the factors in the cancelling, so that, for example, in *X*, the positive factor, and in *Y*, the negative factor, has the preponderance, (thus rendering the one body positively, and the other negatively, electric).—All difference is difference of electricity.*

(*e*) That the identity of matter is not *absolute* identity, but only *indifference*, can be proved from the possibility of again cancelling the identity, and from the accompanying phenomena.† We may be allowed, for brevity's sake, to include this recancelling, and its resultant phenomena under the expression *dynamical process*, without, of course, affirming decisively whether anything of the sort is everywhere actual.

Now there will be exactly as many stages in the dynamical process as there are stages of transition from difference to indifference.

(*a*) The first stage will be marked by objects *in which the reproduction and recancelling of the antithesis at every step is still itself an object of perception.*

The whole product is reproduced anew at every step,‡ that is, the antithesis which cancels itself in it, springs up afresh every moment; but this reproduction of difference loses itself immediately in *universal* gravity;§ this reproduction, therefore, can be perceived only in *individual* objects, which seem to gravitate *towards each other*; since, if to the one factor of an antithesis is offered its opposite (in another) *both factors* become *heavy with reference to each other*, in which case, therefore, the general gravity is not cancelled, but a special one occurs *within* the general.—An instance of such a mutual relation between two products, is that of the earth and the magnetic needle, in which is distinguished the continual recancelling of indifference in gravitation towards the poles‖—the continual sinking back into identity** in gravitation towards the universal indifference-point. Here, therefore, it is not the *object*, but the *being-reproduced of the object* that becomes object.††

* It is here taken for granted that what we call the quality of bodies, and what we are wont to regard as something homogeneous, and the ground of all homogeneity is really only an expression for a cancelled difference.

† In the M.S. copy the last part of this sentence reads as follows: The construction of quality ought necessarily to be capable of experimental proof, by the recancelling the identity, and of the phenomena which accompany it.

‡ Every body must be thought as reproduced at every step—and therefore also every total product.

§ The *universal*, however, is never perceived, for the simple reason that it is universal.

‖ Whereby what was said above is confirmed,—that falling toward the centre is a compound motion.

** The reciprocal cancelling of opposite motions.

†† Or the object is seen in the first stage of becoming, or of transition from difference to indifference. The phenomena of magnetism even serve, so to speak, as an impulse, to transport us to the standpoint beyond the product, which is necessary in order to the construction of the product.

(β) At the first stage, *in* the identity of the product, its duplicity again appears; at the second, the antithesis will divide up and distribute itself among different objects (*A* and *B*). From the fact that the one factor of the antithesis attained a *relative* preponderance in *A*, the other in *B*, there will arise, according to the same law as in α, a *gravitation* of the factors toward each other, and so a new difference, which, when the relative equiponderance is restored in each, results in repulsion*—(change of attraction and repulsion, *second* stage in which matter is seen)—*electricity.*

(γ) At the second stage the one factor of the product had only a *relative* preponderance;† at the *third* it will attain an *absolute* one—by the two bodies *A* and *B*, the original antithesis is again completely represented—matter will revert to the *first stage* of becoming.

At the *first stage* there is still PURE *difference*, without substrate [for it was only out of it that a substrate arose]; at the second stage it is the *simple* factors of two *products* that are opposed to each other; at the third it is the PRODUCTS THEMSELVES that are opposed; here is difference in the *third* power.

If two products are absolutely opposed to each other,‡ then in each of them singly indifference of gravity (by which alone each *is*) must be *cancelled*, and they must gravitate to *each other*.§ (In the second stage there was only a mutual gravitating of the factors to each other—here there is a gravitating of the products.)‖—This process, therefore, first assails the *indifferent* (*element*) *of the* PRODUCT—that is, the products themselves dissolve.

Where there is equal difference there is equal indifference; difference of *products*, therefore, can end only with *indifference of products*.—(All hitherto deduced indifference has been only indifference of substrateless, or at least simple factors.—Now we come to speak of an indifference of products.) This struggle will not cease till there exists a common product. The product, in forming itself, passes, from both sides, through all the intermediate links that lie between the two products [for example, through all the intermediate stages of specific gravity], till it finds the point at which it succumbs to indifference, and the product is fixed.

GENERAL REMARK.

By virtue of the first construction, the product is posited as identity; this identity, it is true, again resolves itself into an antithesis, which, however, is no longer an antithesis cleaving to *products*, but an antithesis in the *productivity* itself.—The product, therefore, *as* product, is identity.—But even in the sphere of products, there again arises a duplicity in the second stage, and it is only in the third that even the duplicity of the *products* again becomes *identity* of the products.**—There is therefore here also a progress from thesis to antithesis, and thence to synthesis.—The last synthesis of matter closes in the chemical process; if composition is to proceed yet further in it, then this circle must open again.

* There will result the opposite effect—a *negative* attraction, that is, repulsion. Repulsion and attraction stand to each other as positive and negative magnitudes. Repulsion is only negative attraction—attraction only negative repulsion; as soon, therefore, as the maximum of attraction is reached, it passes over into its opposite—into repulsion.

† If we designate the factors as + and —electricity, then, in the second stage, + electricity had a relative preponderance over — electricity.

‡ If no longer the individual factors of the two products, but the whole products themselves are absolutely opposed to each other.

§ For product is something wherein antithesis cancels itself, but it cancels itself only through indifference of gravity. When, therefore, two products are opposed to each other, the indifference in each *individually* must be absolutely cancelled, and the whole products must gravitate towards each other.

‖ In the electric process, the whole product is not active, but only the one factor of the product, which has the relative preponderance over the other. In the chemical process in which the *whole product* is active, it follows that the indifference of the whole product must be cancelled.

** We have therefore the following scheme of the dynamical process:

First stage: Unity of the product—magnetism.

Second stage: Duplicity of the products—electricity.

Third stage: Unity of the products—chemical process.

We must leave it to our readers themselves to make out the conclusions to which the principles here stated lead, and the universal interdependence which is introduced by them into the phenomena of Nature.—Nevertheless, to give one instance: when in the chemical process the bond of gravity is loosed, the phenomenon of *light* which accompanies the chemical process in its greatest perfection (in the process of combustion), is a remarkable phenomenon, which, when followed out further, confirms what is stated in the Outlines, page 146:—"The action of light must stand in secret interdependence with the action of gravity which the central bodies exercise."—For, is not the indifference dissolved at every step, since gravity, as ever active, presupposes a continual cancelling of indifference?—It is thus, therefore, that the sun, by the distribution exercised on the earth, causes a universal separation of matter into the primary antithesis (and hence gravity). This universal cancelling of indifference is what appears to us (who are endowed with life) as *light;* wherever, therefore, that indifference is dissolved (in the chemical process), there light *must* appear to us. According to the foregoing, it is *one* antithesis which, beginning at magnetism, and proceeding through electricity, at last loses itself in the chemical phenomena.* In the chemical process, namely, *the whole product* + *E* or — *E* (the *positively* electric body, in the case of absolutely *unburnt* bodies, is always the *more combustible*;† whereas the *absolutely incombustible* is the cause of all *negatively* electric condition;) and if we may be allowed to invert the case, what then are bodies themselves but condensed (confined) electricity? In the chemical process the whole body dissolves into + *E* or — *E*. Light is everywhere the appearing of the *positive* factor in the primary antithesis; hence, wherever the antithesis is restored, there is *light* for us, because generally only the positive factor is beheld, and the negative one is only felt.—Is the connection of the diurnal and annual deviations of the magnetic needle with light now conceivable—and, if in every chemical process the antithesis is dissolved, is it conceivable that Light is the cause and beginning of all chemical process?‡

* The conclusions which may be deduced from this construction of dynamical phenomena are partly anticipated in what goes before. The following may serve for further explanation:

The chemical process, for example, in its highest perfection is a process of combustion. Now I have already shown on another occasion, that the condition of light in the body undergoing combustion is nothing else but the maximum of its positive electrical condition. For it is always the positively electrical condition that is also the combustible. Might not, then, this coexistence of the phenomenon of light with the chemical process in its highest perfection give us information about the ground of every phenomenon of light in Nature?

What happens, then, in the chemical process? Two whole products gravitate towards each other. The *indifference* of the *individual* is therefore *absolutely* cancelled. This absolute cancelling of indifference puts the whole body into the condition of light, just as the partial in the electric process puts it into a partial condition of light. Therefore, also the light—what seems to stream to us from the sun—is nothing else but the phenomenon of indifference cancelled at every step. For as gravity never ceases to act, its condition—antithesis—must be regarded as springing up again at every step. We should thus have in light a continual, visible appearing of gravitation, and it would be explained why, in the system of worlds, it is exactly those bodies which are the principal seat of gravity that are also the principal source of light. We should then, also, have an explanation of the connection in which the action of light stands to that of gravitation.

The manifold effects of light on the deviations of the magnetic needle, on atmospheric electricity, and on organic nature, would be explained by the very fact that light is the phenomenon of indifference continually cancelled—therefore, the phenomenon of the dynamical process continually rekindled. It is, therefore, one antithesis that prevails in all dynamical phenomena—in those of magnetism, electricity and light; for example, the antithesis, which is the condition of the electrical phenomena must already enter into the first construction of matter. For all bodies are certainly electrical.

† Or rather, conversely, the more combustible is always also the positively electric; whence it is manifest that the body which burns has merely reached the maximum of + electricity.

‡ And indeed it is so. What then is the absolute incombustible? Doubtless, simply that wherewith everything else burns—oxygen. But it is precisely this absolutely incombustible oxygen that is the principle of negative electricity, and thus we have a confirmation of what I have already stated in the Ideas for a Philosophy of Nature, viz. that oxygen is a

(*f*) The dynamical process is nothing but the second construction of matter, and however many stages there are in the dynamical process, there are the same number in the original construction of matter.

This axiom is the converse of axiom *e*.*

principle of a negative kind, and therefore the representative, as it were, of the power of attraction; whereas phlogiston, or, what is the same thing, positive electricity, is the representative of the positive, or of the force of repulsion. There has long been a theory that the magnetic, electric, chemical, and, finally, even the organic phenomena, are interwoven into one great interdependent whole. This must be established. It is certain that the connection of electricity with the process of combustion may be shown by numerous experiments. One of the most recent of these that has come to my knowledge I will cite. It occurs in Scherer's *Journal of Chemistry*. If a Leyden jar is filled with iron filings, and repeatedly charged and discharged, and if, after the lapse of some time, this iron is taken out and placed upon an isolator—paper, for example—it begins to get hot, becomes incandescent, and changes into an oxide of iron. This experiment deserves to be frequently repeated and more closely examined—it might readily lead to something new.

This great interdependence, which a scientific system of physics must establish, extends over the whole of Nature. It must, therefore, once established, spread a new light over the History of the whole of Nature. Thus, for example, it is certain that all geology must start from terrestrial magnetism. But terrestrial electricity must again be determined by magnetism. The connection of North and South with magnetism is shown even by the irregular movements of the magnetic needle. But again, with universal electricity, which, no less than gravity and magnetism, has its indifference point—the universal process of combustion and all volcanic phenomena stand connected.

Therefore, it is certain that there is one chain going from universal magnetism down to the volcanic phenomena. Still these are all only scattered experiments.

In order to make this interdependence *fully* evident, we need the central phenomenon, or central experiment, of which Bacon speaks oracularly—(I mean the experiment wherein all those functions of matter, magnetism, electricity, &c., so run together in one phenomenon that the *individual* function is distinguishable)—proving that the one does not lose itself immediately in the other, but that each can be exhibited separately—an experiment which, when it is discovered, will stand in the same relation to the *whole* of Nature, as galvanism does to organic nature. [Compare this with the discourse on Faraday's latest discovery, (1832,) p. 15. Complete Works, 1st Div., last vol.]

* Proof—All dynamical phenomena are phenomena of transition from difference to indifference. But it is in this very transition that matter is primarily constructed. That which, in the dynamical process is perceived in the product, takes place *outside* of the product with the simple factors of all duality.

The first start to original production is the limitation of productivity through the primitive antithesis, which, *as* antithesis (and as the condition of all construction), is distinguished only in *magnetism*; the second stage of production is the *change* of contraction and expansion, and as such becomes visible only in *electricity*; finally, the third stage is the transition of this change into indifference—a change which is recognized as such only in *chemical* phenomena.

Magnetism, Electricity and Chemical Process are the *categories* of the original construction of nature [matter]—the latter escapes us and lies outside of intuition, the former are what of it remains behind, what stands firm, what is fixed—the general schemes for the construction of matter.†

And—in order to close the circle at the point where it began—just as in organic nature, in the scale of sensibility, irritability, and formative instinct, the secret of the production of the *whole of organic nature* lies in each individual, so in the scale of magnetism, electricity, and chemical process, so far as it (the scale) can be distinguished in the individual body, is to be found the secret of the production of *Nature from itself* [of the whole of Nature‡].

† In the already mentioned discourse on Faraday's latest discovery, the author cites the passage (p. 75, original edition,) as well as § 56 sq. of the *General View of the Dynamical Process* (likewise written *before* the invention of the voltaic pile,) as a proof of his having *anticipated* the discoveries which proved the *unity* of the electrical and the chemical antithesis, and of the similar connection subsisting between magnetic and chemical phenomena. (See also Remark 2, p. 216.)

‡ Every individual is an expression of the whole of Nature. As the existence of the *single* organic individual rests on that scale, so does the whole of Nature. Organic nature maintains the whole wealth and variety of her products only by continually changing the relation of those three functions.—In like manner inorganic Nature brings forth the whole wealth of her product, only by changing the relation of those three functions of matter *ad infinitum*; for magnetism, electricity, and chemical process are the functions of

C.

We have now approached nearer the solution of our problem, which was: To reduce the construction of organic and inorganic nature to a common expression.

Inorganic nature is the product of the *first* power, organic nature of the *second* * —(this was demonstrated above; it will soon appear that the latter is the product of a still higher power)—hence the latter, in view of the former, appears contingent; the former, in view of the latter, necessary. Inorganic nature can take its origin from *simple* factors, organic nature only from products, which again become factors. Hence an inorganic nature generally will appear as having been from all eternity, the organic nature as *originated.*

In the organic nature, indifference can never be arrived at in the same way in which it is arrived at in inorganic nature, because life consists in nothing more than a continual *prevention of the attainment of indifference* [a prevention of the absolute transition of productivity into product] whereby manifestly there comes about only a condition which is, so to speak, extorted from Nature.

By organization, matter—which has already been composed for the second time by the chemical process—is once more thrown back to the initial point of formation (the circle above described is again opened); it is no wonder that matter always thrown back again into formation at last returns as a perfect product.

The same stages, through which the production of Nature originally passes, are also passed through by the production of the organic product; only that the latter, even *in the first stage*, at least begins with products of the *simple* power.—Organic production also begins with limitation, not of the *primary* productivity, but of the *productivity of a product;* organic formation also takes place through the change of expansion and contraction, just as primary formation does; but in this case it is a change taking place, not in the simple productivity, but in the compound.

But there is all this, too, in the chemical process,† and yet in the chemical process indifference is attained. The vital process, therefore, must again be a higher power of the chemical; and if the scheme that lies at the base of the latter is duplicity, the scheme of the former will of necessity be *triplicity* [the former will be a process of the third power]. But the scheme of triplicity is [in reality] that [the fundamental scheme] of the galvanic process (Ritter's *Demonstration,* &c., p. 172); therefore the galvanic process (or the process of irritation) stands a power higher than the chemical, and the third element, which the latter lacks and the former has, prevents indifference from being arrived at in the organic product.‡

As irritation does not allow indifference to be arrived at in the individual product, and as the antithesis is still there (for the primary antithesis still pursues us),§ there remains for nature no alternative but separation of the factors in *different* products.‖ The formation of the individual product,

matter generally, and on that ground alone are they categories for the construction of all matter. This fact, that those three factors are not phenomena of special kinds of matter, but *functions of all matter* universally, gives its real, and its innermost sense to dynamical physics, which, by this circumstance alone, rises far above all other kinds of physics.

* That is, the organic product can be thought only as subsisting under the hostile pressure of an external nature.

† The chemical process, too, has not substrateless or simple factors; it has products for factors.

‡ The same deduction is already given in the Outlines, p. 163.—What the dynamical action is, which according to the Outlines is also the cause of irritability, is now surely clear enough. It is the *universal action* which is everywhere conditioned by the cancelment of indifference, and which at last tends towards intussusception (indifference of products) when it is not continually prevented, as it is in the process of irritation. (*Remark of the original.*)

§ The abyss of forces, into which we here look down, opens with the one question: In the first construction of our earth, what can have been the ground of the fact that no genesis of new individuals is possible upon it, otherwise than under the condition of opposite powers? Compare an utterance of Kant on this subject, in his Anthropology. (*Remark of the original.*)

‖ The two factors can never be *one,* but must be separated into different products—in order that thus the difference may be permanent.

for that very reason, cannot be a completed formation, and the product can never cease to be productive.* The contradiction in Nature is this, that the product must be *productive* [i. e. a product of the third power], and that, notwithstanding, the product, *as* a product of the third power, must pass over into indifference.†

This contradiction Nature tries to solve by mediating *indifference* itself through *productivity*, but even this does not succeed—for the act of productivity is only the kindling spark of a new process of irritation; the product of productivity is a *new productivity*. Into this as its product the productivity of the *individual* now indeed passes over; the individual, therefore, ceases more rapidly or slowly to be productive, and Nature reaches the indifference-point with it only after the latter has got down to a product of the second power.‡

And now the result of all this?—The condition of the inorganic (as well as of the organic) product, is duality. In any case, however, organic *productive product* is so only from the fact *that the difference* NEVER *becomes indifference.*

It is [in so far] therefore impossible to reduce the construction of organic and of inorganic product to a *common* expression, and the problem is incorrect, and therefore the solution impossible. The problem presupposes that organic product and inorganic product are mutually *opposed*, whereas the latter is only the *higher power* of the former, and is produced only by the higher power of the forces through which the latter also is produced. Sensibility is only the higher power of magnetism; irritability only the higher power of electricity; formative instinct only the higher power of the chemical process.—But sensibility, and irritability, and formative instinct are all only included in that *one* process of irritation. (Galvanism affects them all).§ But if they are only the higher functions of magnetism, electricity, &c., there must again be a higher synthesis for these in Nature‖—and this, however, it is certain, can be sought for

* In the product, indifference of the first and second powers is arrived at (for example, by irritation itself an origin of *mass* [i. e. indifference of the first order] and even *chemical products* [i. e. indifference of the second order] are reached), but indifference of the third power can never be reached, because it is a contradictory idea. (*Remark of the original.*)

† The product is productive only from the fact of its being a product of the third power. But the idea of a productive product is itself a contradiction. What is productivity is not product, and what is product is not productivity. Therefore a product of the third power is itself a contradictory idea. From this even is manifest what an extremely artificial condition life is—wrenched, as it were, from Nature—subsisting against her will.

‡ Nothing shows more clearly the contradictions out of which life arises, and the fact that it is altogether only a heightened condition of *ordinary* natural forces, than the contradiction of Nature in what she tries, but tries in vain, to reach through the *sexes*.—Nature *hates* sex, and where it does arise, it arises against her will. The diremption into sexes is an inevitable fate, with which, after she is once organic, she must put up, and which she can never overcome.—By this very hatred of diremption she finds herself involved in a contradiction, inasmuch as what is odious to her she is compelled to develop in the most careful manner, and to lead to the summit of existence, as if she did it on purpose; whereas she is always striving only for a return into the identity of the genus, which, however, is chained to the (never to be cancelled) duplicity of the sexes, as to an inevitable condition. That she develops the individual only from compulsion, and for the sake of the genus, is manifest from this, that wherever in a genus she *seems* desirous of maintaining the individual longer (though this is never really the case), she finds the genus becoming more uncertain, because she must hold the sexes farther asunder, and, as it were, make them flee from each other. In this region of Nature, the decay of the individual is not so visibly rapid as it is where the sexes are nearer to each other, as in the case of the rapidly withering flower, in which, from its very birth, they are enclosed in a calix as in a bride-bed, but in which, for that very cause, the *genus* is better *secured*.

Nature is the *laziest of animals*, and curses diremption, because it imposes upon her the necessity of activity; she is active only in order to rid herself of this necessity. The opposites must for ever shun, in order for ever to seek, each other; and for ever seek, in order never to find, each other; it is only in *this* contradiction that the ground of all the activity of Nature lies. (*Remark of the original.*)

§ Its effect upon the power of reproduction (as well as the reaction of particular conditions of the latter power upon galvanic phenomena) is less studied still than might be needful and useful.—Vide Outlines, p. 177.—(*Remark of the original.*)

‖ Compare above Remark, p. 197. (*Remark of the original.*)

only in Nature, in so far as, viewed as a whole, it is *absolutely* organic.

And this, moreover, is also the result to which the genuine Science of Nature must lead, viz: that the difference between organic and inorganic nature is only in Nature as object, and that Nature as originally-*productive* soars above both.*

There remains only one remark, which we may make, not so much on account of its intrinsic interest, as in order to justify what we said above in regard to the relation of our system to the hitherto so-called dynamical system. If it were asked, for instance, in what form our original antithesis, cancelled, or rather fixed, in the product, would appear from the stand-poiut of reflection, we cannot better designate what is found in the product by analysis, than as *expansive* and *attractive* (retarding) *force*, to which then however, gravitation must always be added as the *tertium quid*, whereby those opposites become what they are.

Nevertheless, the designation is valid only for the stand-point of reflection or of *analysis*, and cannot be applied for *synthesis* at all; and thus our system leaves off exactly at the point where the Dynamical Physics of Kant and his successors begins, namely, at the antithesis as it presents itself in the product.

And with this the author delivers over these Elements of a System of Speculative Physics to the thinking heads of the age, begging them to make common cause with him in this science, which opens up views of no mean order, and to make up by their own powers, acquirements and external relations, for what, in these respects, he lacks.

[The notes not marked as "Remarks of the original" are by the German Editor.—*Note of the Translator.*]

* That it is therefore the same nature, which, by the same forces, produces organic phenomena, and the universal phenomena of Nature, and that these forces are in a heightened conditioned in organic nature.

ANALYSIS OF HEGEL'S ÆSTHETICS.

[Translated from the French of M. Ch. Benard, by J. A. Martling.]

II. Sculpture. — Architecture fashions and disposes of the masses of inert nature according to geometric laws, and it thus succeeds in presenting only a vague and incomplete symbol of the thought. Its [thought's] progress consists in detaching itself from physical existence, and in expressing spirit in a manner more in conformity with its nature. The first step which art takes in this career does not yet indicate the return of spirit upon itself, which would render necessary a wholly spiritual mode of expression, and signs as immaterial as thought; but spirit appears under a corporeal, organized living form. What art represents is the animate, living body, and above all the human body, with which the soul is completely identified. Such is the *rôle* and the place which belong to Sculpture.

It still resembles *architecture* in this, that it fashions extended and solid material; but it is distinguished from it in this, that this material, in its hands, ceases to be foreign to spirit. The corporeal form blends with it, and becomes its living image. Compared to poetry, it seems at first to have the advantage over it of representing objects under their natural and visible form, while speech expresses ideas only by sounds; but this plastic clearness is more than compensated by the superiority of language as a means of expression. Speech reveals the innermost thoughts with a clearness altogether different from the lines of the figure, the countenance, and the attitudes of the body; further, it shows man in action—active in virtue of his ideas and his passions; it retraces the various phases of a complete event. Sculpture represents neither the inmost sentiments of the soul, nor its definite passions. It presents the individual character only in general, and

to such an extent as the body can express in a given moment, without movement, without living action, without development. It yields also, in this respect, to painting, which, by the employment of color and the effects of light, acquires more of naturalness and truth, and, above all, a great superiority of expression. Thus, one might think at first that Sculpture would do well to add to its own proper means those of painting. This is a grave error; for that abstract form, deprived of color, which the statuary employs is not an imperfection in it—it is the limit which this art places upon itself.

Each art represents a degree, a particular form of the beautiful, a moment of the development of spirit, and expresses it excellently. To Sculpture it belongs to represent the perfection of the bodily form, plastic beauty, life, soul, spirit animating a body. If it should desire to transcend this limit, it would fail entirely; the use of foreign means would alter the purity of its works.

It is with art here as with science; each science has its object, peculiar, limited, abstract; its circle, in which it moves, and where it is free. Geometry studies extension, and extension only; arithmetic, number; jurisprudence, the right; &c. Allow any one to encroach upon the others, and to aim at universality; you introduce into its domain confusion, obscurity, real imperfection. They develop differently different objects; clearness, perfection, and even liberty, are to be purchased only at this price.

Art, too, has many phases; to each a distinct art corresponds. Sculpture stops at form, which it fashions according to its peculiar laws; to add color thereto is to alter, to disfigure its object. Thereby it preserves its character, its functions, its independence; it represents the material, corporeal side, of which architecture gives only a vague and imperfect symbol. It is given to painting, to substitute for this real form, a simple visible appearance, which then admits color, by joining to it the effects of perspective, of light and shade. But Sculpture ought to respect its proper limits, to confine itself to representing the corporeal form as an expression of the individual spirit, of the soul, divested of passion and definite sentiment. In so doing, it can so much the better content itself with the human form in itself, in which the soul is, as it were, spread over all points.

Such is also the reason why Sculpture does not represent spirit in action, in a succession of movements, having a determined end, nor engaged in those enterprises and actions which manifest a character. It prefers to present it in a calm attitude, or when the movement and the grouping indicate only the commencement of action. Through this very thing, that it presents to our eyes spirit absorbed in the corporeal form, designed to manifest it in its entirety, there is lacking the essential point where the expression of the soul centres itself, the glance of the eye. Neither has it any need of the magic of colors, which, by the fineness and variety of their shadings, are fitted to express all the richness of particular traits of character, and to manifest the soul, with all the emotions which agitate it. Sculpture ought not to admit materials of which it has no need at the step where it stops. The image fashioned by it, is of a single color; it employs primitive matter, the most simple, uniform, unicolored: marble, ivory, gold, brass, the metals. It is this which the Greeks had the ability perfectly to seize and hold.

After these considerations upon the general character of Sculpture, and its connections with other arts, Hegel approaches the more special study and the theory of this art. He considers it—1st, in its principle; 2d, in its ideal; 3d, in the materials which it employs, as well as in its various modes of representation and the principal epochs of its historic development.

We are compelled to discard a crowd of interesting details upon each of these points, and to limit ourselves to general ideas.

1. To seize fully the principle of Sculpture and the essence of this art, it is nec-

essary to examine, in the first place, what constitutes the *content* of its representations, then the corporeal *form* which should express it; last, to see how, from the perfect accord of the idea and the form, results the *ideal* of Sculpture as it has been realized in Greek art.

The essential content of the representations of Sculpture is, as has been said, spirit incarnate in a corporeal form. Now, not every situation of the soul is fitted to be thus manifested. Action, movement, determined passion, can not be represented under a material form; that ought to show to us the soul diffused through the entire body, through all its members. Thus, what Sculpture represents is the individual spirit, or, according to the formula of the author, the spiritual individuality in its essence, with its general, universal, eternal character; spirit elevated above the inclinations, the caprices, the transient impressions which flow in upon the soul, without profoundly penetrating it. This entire phase of the personal principle ought to be excluded from the representations of Sculpture. The content of its works is the essence, the substantial, true, invariable part of character, in opposition to what is accidental and transient.

Now, this state of spirit, not yet particularized, unalterable, self-centered, calm, is the divine in opposition to finite existence, which is developed in the midst of accidents and contingencies, the exhibition of which this world of change and diversity presents us.

According to this, Sculpture should represent the divine in itself, in its infinite calm, and its eternal, immovable sublimity, without the discord of action and situation. If, afterward, affecting a more determinate mode, it represents something human in form and character, it ought still to thrust back all which is accidental and transient; to admit only the fixed, invariable side, the ground of character. This fixed element is what Sculpture should express as alone constituting the true individuality; it represents its personages as beings complete and perfect in themselves, in an absolute repose freed from all foreign influence. The eternal in gods and men is what it is called upon to offer to our contemplation in perfect and unalterable clearness.

Such is the idea which constitutes the essential content of the works of Sculpture. What is the *form* under which this idea should appear? We have seen, it is the body, the corporeal form. But the only form worthy to represent the spirit, is the *human form*. This form, in its turn, ought to be represented, not in that wherein it approximates the animal form, but in its ideal beauty; that is to say, free, harmonious, reflecting the spirit in the features which characterize it, in all its proportions, its purity, the regularity of its lines, by its mien, its postures, etc. It should express spirit in its calmness, its serenity—both soul and life, but above all, spirit.

These principles serve to determine the ideal of beauty under the physical form.

We must take care, in the works of Sculpture, not to confound this manner of looking at the perfect correspondence of the soul and bodily forms, with the study of the lineaments of the countenance, etc. The science of Gall, or of Lavater, which studies the correspondence of characters with certain lineaments of face or forms of head, has nothing in common with the artistic studies of the works of the statuary. These seem, it is true, to invite us to this study; but its point of view is wholly different; it is that of the harmonious and necessary accord of forms, from which beauty results. The ground of Sculpture excludes, moreover, precisely all the peculiarities of individual character to which the physiognomist attaches himself. The ideal form manifests only the fixed, regular, invariable, although living and individual type. It is then forbidden to the artist, as far as regards the physiognomy, to represent the most expressive and determinate lineaments of the countenance; for, beside looks, properly so-called, the expression of the physiognomy includes many things which are reflected transiently upon the face, in the countenance or the carriage, the smile and the glance. Sculpture should interdict to itself things so

transient, and confine itself to the permanent traits of the expression of the spirit; in a word, it should incarnate in the human form the spiritual principle in its nature, at once general and individual, but not yet particularized. To maintain these two terms in just harmony, is the problem which falls to statuary, and which the Greeks have resolved.

The consequences to be deduced from these principles are the following:

In the first place, Sculpture is, more than the other arts, suited to the ideal, and this because of the perfect adaptation of the form to the idea; in the second place, it constitutes the centre of classic art, which represents this perfect accord of the idea and the sensuous form. It alone, in fact, offers to us those ideal figures, pure from all admixture—the perfect expression of physical beauty. It realizes, before our eyes, the union of the human and divine, under the corporeal form. The sense of plastic beauty was given above all to the Greeks, and this trait appears everywhere, not only in Greek art and Greek mythology, but in the real world, in historic personages: Pericles, Phidias, Socrates, Plato, Xenophon, Sophocles, Thucydides, those artistic natures, artists of themselves—characters grand and free, supported upon the basis of a strong individuality, worthy of being placed beside the immortal gods which Greek Sculpture represents.

2. After having determined the principle of Sculpture, Hegel applies it to the study of the *beau ideal*, as the master-pieces of Greek art have realized it. He examines successively and in detail the character and conditions of the *ideal form* in the different parts of the human body, *the face, the looks, the bearing, the dress.* Upon all these points he faithfully follows Winckelmann, recapitulates him, and constantly cites him. The philosopher meanwhile preserves his originality; it consists in the manner in which he systematizes that which is simply described in the History of Art, and in giving throughout, the reason of that which the great critic, with his exquisite and profound sense, has so admirably seized and undeniably proved, but without being able to unfold the theory of it. The subject gathers, henceforth, new interest from this explication. We may cite, in particular, the description of the Greek profile, which, in the hands of the philosopher, takes the character of a geometric theorem. It is at the same time an example which demonstrates unanswerably the absolute character of physical beauty. The beauty of these lines has nothing arbitrary; they indicate the superiority of spirit, and the pre-eminence of the forms which express it above those which are suited to the functions of the animal nature. What he afterwards says of the looks, of the bearing, of the postures, of the antique dress compared with the modern dress, and of its ideal character, presents no less interest. But all these details, where the author shows much of discrimination, of genius even, and spirit, escape in the analysis. The article where he describes the particular attributes and the accessories which distinguish the personages of Greek Sculpture, although in great part borrowed also from Winckelmann, shows a spirit familiarized with the knowledge of the works of antiquity.

3. The chapter devoted to the different *modes* of representation of the materials of Sculpture, and of its historic development, is equally full of just and delicate observations. All this is not alone from a theorist, but from a connoisseur and an enlightened judge. The appreciation of the *materials of Sculpture*, and the comparison of their æsthetic value, furnish also to the author some very ingenious remarks upon a subject which seems scarcely susceptible of interest. Finally, in a rapid sketch, Hegel retraces the *historic development* of Sculpture, Egyptian Statuary, Etruscan art, the school of Ægina, are characterized in strokes remarkable for precision.

Arrived at *Christian Sculpture*, without disputing the richness and the ability which it has displayed in its works in wood, in stone, etc., and its excellence in respect to expression, Hegel maintains with reason, that the Christian principle is little favorable to Sculpture; and that in wishing

to express the Christian sentiment in its profundity and its vivacity, it passes its proper limits. "The self-inspection of the soul, the moral suffering, the torments of body and of spirit, martyrdom and penitence, death and resurrection, the mystic depth, the love and out-gushing of the heart, are wholly unsuited to be represented by Sculpture, which requires calmness, serenity of spirit, and in expression, harmony of forms." Thus, Sculpture here remains rather an ornament of architecture; it sculptures saints, bas reliefs upon the niches and porches of churches, turrets, etc. From another side, through arabesques and bas reliefs, it approximates the principle of painting, by giving too much expression to its figures, or by making portraits in marble and in stone. Sculpture comes back to its true principle, at the epoch of the *renaissance*, by taking for models the beautiful forms of Greek art.

A DIALOGUE ON MUSIC.

By Edward Sobolewski.

Q. Tell me what is good music?

A. Concerning tastes—all fine natures—not the "fair sex" only, possess, as Bossuet says, an instinct for harmony of forms, colors, style and tones, especially for the latter, because the nerves of the ear being more exposed, are consequently more sensitive.

Discords massed together without system, produce a more disagreeable effect than ill-assorted colors; and on the other hand, the etherial beauty of tone-poetry excites the soul more powerfully than the splendor of a Titian or Correggio.

Q. This "instinct" and "taste," are they one and the same?

A. To a certain degree only—though many amateurs, critics, musicians, and even composers, have had no other guide than a fine instinct.

Q. You speak as Pistocchi to the celebrated Farinelli: "A singer needs a hundred things, but a good voice is ninety-nine of them—the hundredth is the cultivation of the voice."

A. The instinct of a delicate, sensitive organization, may go far, but I think the hundredth thing is also necessary; therefore, one possessed of the finest voice, but uncultivated, will sing sometimes badly, sometimes pretty well, but never quite perfectly for a real judge.

So it is with taste. Depending on natural gifts alone, without cultivation—you will be sometimes right—as often wrong. In short, your taste is good, if you find pleasure in those works only which are composed according to the principles of art; on the contrary, your taste is bad, false, corrupt, if you find pleasure in music full of faults and defects.

Q. Therefore, to be correct in taste, I must know the principles of the art; I must know the rules of "Harmony, Rhythm and Form," and perhaps much more. Why, G. Weber has written three large volumes on "Harmony" alone. No, it is too difficult and takes too much time.

A. Yet it is not so difficult as it seems. To understand music rightly, nothing is necessary but the knowledge of two keys—major and minor; two kinds of time—common and triple—one simple chord and two cadences.

Q. But Rhythm, Form?

A. Form is Rhythm, and Rhythm is time.

Q. Let us begin then with the keys, you speak of two only—major and minor—but I have heard something of Ambroseanic, Gregoryanic, Glareanic and Greek keys, wherein are composed the beautiful and sublime compositions of Palestrina, Allegri, Lotti, that are performed annually during Passion-week in the church of St. Peter, at Rome.

A. Well, if you like to go so far back,

we will speak about Ambrose, Gregory, Glareanus, but there are no such things as "Greek" keys.

The knowledge we have of the music of the Greeks, is too slight and imperfect to enable us to assert positively anything concerning it; and as nothing important or necessary to modern art is involved, we may be content to let the music of the ancients rest in the obscurity which surrounds it.

With the first Christians, who hated everything which came from the temples of the heathens, arose our music.

Their religious songs were a production of the new soul which came into them with Jesus Christ, and are the foundation of our great edifice of art, as it now exists. In the year 385, Saint Ambrose introduced four keys, D, E, F, G; Pope Gregory, in 597, added four others to these, and named the four of Ambrose, "authentic moods," and his four, which began on every fifth of the first four, "plagalic." In these eight keys, without sharps or flats, are composed the liturgic songs of the Roman church, called "Gregorian chants." They are written in notes of equal value, without Rhythm or Metre, and are sung in unison with loud voice. Glareanus added to those eight keys, two more, A and C, with their plagal moods. To distinguish more clearly, some one called the key beginning with "D," Doric, "E," Phrygic, "F," Lydic, "G," Mixolydic, "A," Æolic, and "B," Tonic. These names are all we have borrowed from Greece.

Palestrina, the preserver of our art, wrote his compositions in these keys, and for the highest purity of harmony, rhythmical beauty, sublime simplicity, and deep religious feeling, his works are still unrivalled.

Q. Why don't you compose in the old keys and in Palestrina's style?

A. They are used sometimes by Handel in his Oratorios, by Sebastian Bach in his fugues for organ and piano. Later, Beethoven has written an Andante in the Lydic mood in his string-quartette (A minor). I myself have composed the first chorus of Vinvela, in the Mixolydic mood, and in Comala, the song to the moon, in the Doric mood; but Handel, Bach, Beethoven, and myself, have written in our own style, and never imitated Palestrina's. Men in similar situations, only, have similar ideas. All older works of music utter a language which we yet understand, but cannot speak. We feel its deep innermost accents, but we cannot tune the chords of our soul to that pitch which harmonizes in every respect with that feeling. Palestrina's music sounds like that of another world; it is all quite simple; mostly common chords, here and there only a chord of the sixth; and always an irresistible charm.

This riddle is partially explained, if we observe how Palestrina selected the tones for the different parts in his choruses. Let us take the third, c—e; e. g. let the soprano and the alto sing this third, and you will have the same harmonic sound that the piano or organ gives. But let the tenor sing one of these tones, and soprano or alto the other, and the effect will be very different, although the tones are the same. Palestrina knew not only the particular sound of every tone in every voice, but also the effect which such or such combinations would produce.

This mystery is taught neither by a singing school, nor by a theory of composition, and few composers of to-day know it. How great and beautiful is Beethoven's solemn mass in D! What an effect would it make, had Beethoven possessed the same knowledge of voices that he had of instruments? Now, unfortunately, one often overpowers the others, and the enjoyment of this composition will be always greater for the eye than the ear.

We will now go back to the old keys. These are taken from the music produced at that time, as our two keys, major and minor, are taken from the melodies of later times.

This seems very simple to us, but not to our great theorists. Gottfried Weber takes two keys, major c, d, e, f, g, a, b, c, and minor a, b, c, d, e, f, g *sharp*, the same rising and falling equally.

Hauptmann, the first teacher of harmony in the Conservatory of Music at Leipsic, says in his book, The Nature of Harmony and Metre, page 30—"The key is form-

ed, when the common chord (c, e, g), after having gone through the subdominant-chord (f, a, c), and dominant-chord (g, b, d), has come in opposition with itself; this opposition coupled together, becomes *unity* and the *key*." He finds in our music three keys, and names them, the major, the minor, and the minor major.

R. Wagner recognizes no key at all; for him exists a chromatic scale only. He says: "The scale is the most closely united, the most intimately related family among tones." He does not like to stay long in one key, and takes the continuous change of keys for a quality of the music of the future; therefore, he finds in Beethoven's last symphony, in the melody to Schiller's poem, a going *back*, because it has scarcely any modulation.

We will not be so lavish with keys as Hauptmann, nor so economical as R. Wagner, neither are we of Weber's opinion. We find in C major the old Glareanic key, called also "Ionic;" in our A minor of this day, a "*mixtum compositum*" of several old keys; it begins as the "Æolic" a, b, c, d, e, f, takes then its seventh tone, g *sharp*, from the Lydic, transposed a third higher; uses sometimes also the sixth of the last, accepts lastly the character of the Phrygic, transposed a fourth higher, and brings thus the tone b *flat* into its scale, which has been already the subject of much discussion, although that has never succeeded in throwing this tone out of many melodies in A minor. We have melodies which are the pure A minor from the beginning to the and, wherein we find f *sharp* and f *natural*, g and g *sharp*, b and b *flat*, and the last oftener than f *sharp*; therefore, we must build the scale of A minor, and its harmony, according to those different tones; it will be a, { b, b *flat*, } c, d, e, { f, f *sharp*, } { g *sharp*, a, g *natural*.

Let us proceed. The two kinds of time are common and triple. The rhythm of the first is — ⏑, that of the second — ⏑ ⏑. The accentuation of subdivisions is governed by the same law. It makes no difference whether a piece of music is written in $\frac{2}{2}$ or $\frac{2}{4}$, or even $\frac{2}{8}$ time; but good composers of music, writing in $\frac{4}{4}$ time, intend the same to be of lighter rendition than those composed in $\frac{2}{2}$ time, etc.

Concerning harmony, there is one chord only—all other harmonies are passing notes, inversions, prolongations, suspensions or retardations of chord-tones, or from sharped and diminished intervals. Harmony is a connection of different melodies. Before chords were known, they descanted, that is, they tried to sing to a melody, commonly a sacred hymn, called *cantus firmus*, different harmonical tones, and named this part, *Descant*; Italian, *soprano*; French, *Le dessus*. Later there was added to the tenor (which performed the *cantus firmus*) a higher part, named *alto*, and lastly, a lower part was added called *bass*. These four parts, though each melodious and independent in itself, harmonized closely with each other, all striving for the same aim.

Even to-day we must necessarily call such music good, wherein every voice acts independently of all others, and still in harmony with the same, in order to express the reigning feeling, and sustain the various shades in contrast to non-acting and lifeless trabants, which may be strikingly seen in many compositions, particularly in four-part songs for male voices, by Abt, Gumbert, Kücken, etc., wherein three voices (*Brummstimmen*) accompany the fourth with a growling sound escaping their closed lips.

The two cadences or musical phrases are the cadence on the tonic and the cadence on the dominant. The cadence on the tonic, consisting of the chord in the dominant, followed by that of the tonic, concludes the sense of the musical phrase, and is called "perfect" when the tonic is in the highest and lowest part. It corresponds to a period in language. The cadence on the dominant consists of the tonic, or the chord of the second or fourth going to the dominant. The cadence of the dominant suspends the sense of the musical phrase without concluding it. This is likewise the case with the cadence on the tonic, if the tonic is not in the highest and lowest part.

Q. You say nothing of the great mistake wherein two fifths or octaves follow each other?

A. Of course, the true nature of the proper arrangement of parts excludes all direct fifths.

It is considered by the new school "an exploded idea." Mozart himself made use of fifths in the first finale of Don Giovanni.

Q. I have heard something of these fifths, but was told it was "irony," being contained in the minuet which Mozart composed for "country musicians"?

A. You also find octaves in S. Bach's "Matthew Passion," p. 25, "On the cross," where surely no ironical meaning was intended.

Q. Do you not say anything in regard to form?

A. Form is an "exploded idea" also. The composers of the new school construct their vocal music so as to let the poem govern the music in relation to metre and form; in their instrumental compositions, the form is governed by phantasy.

Q. But what do you understand by a symphony, sonata or overture?

A. I must again go back, in order to explain this properly.

Revolutions often beat the path for new ideas. Palestrina towers great and unattainable in his compositions of sacred music, which breathe and express the purest catholicism.

But a Luther, Zwingli, and others came, followed soon by Handel and Bach, who, about the middle of the eighteenth century, created a music full of freshness, primitiveness and transporting power, which lived and died with the reformers.

The three grand-masters, Palestrina, Handel and Bach, equal, but do not rival each other. We cannot judge them for the different sentiments they indulged in. The philosophers may settle which is the best religion, for to the necessity of one they all agree, but music cannot be chained by dogmas. Heaven is an orb, whose centre is everywhere. Palestrina's music is the language of the south, Handel's and Bach's that of the north. Though one sun illumes both lands—though one ether spans both, yet in the south the sun is milder, the ether purer. Flowers which there grow in wild abundance, the north must obtain by culture.

We must think at our work.

This necessity of thought is apparent in religion, language and art, and can be seen most clearly in the greatest works of the German grand-masters, in Bach's "Matthew Passion," and Handel's "Israel."

Sebastian Bach's astonishing dexterity in thematical works is the reason that even unto this day we do not find a symphony or overture appropriate for a concert, of which the single motive forming the principal thought of the movement is not worked up on the basis which he constructed with such deep knowledge and skill.

To him we must retrace our steps, in order to perceive the true nature of our instrumental music, for we are as little masters of the course of our ideas, as of the circulation of the blood in our veins. Centuries have passed, and although the first great instrumental-piece—the overture—was a French production, (Lulli was the first master in this *genre* of art,) yet Bach and Handel impressed the first decided stamp upon it.

Later, the overture was supplanted by the symphony, for the reason that it was of easier composition and execution than the former. The overture consisted of a *grave*, followed by a *fugue*. The symphony was composed somewhat in the style of a *fugue* and that of the lively dances of that time.

Shortly after this period, the dance-music was thought no longer fashionable, and was succeeded by two *Allegros*, with an *Andante* or *Largo* placed between them.

Father Hayden felt hurt at the complete abandonment of dance-music, and again adopted the minuet. Mozart also preferred the grave and majestic dancing-step of his ancestors, the minuet. But Beethoven's impetuous and passionate nature scoffed at the slow and gracious movements of the minuet, and revelled instead in the wild Scherzo, or in the capricious demonical leaps of the old *Passepied*. Dark and mighty forms rose before the gloomy vision of his inner-man, acting powerfully upon the phantasy, and wherever they met this volcanic fire, always leaving a deep impression.

Two comets ushered in the existence of our century; the one revolutionized the exterior — the other, the interior world. Especially were the young generation touched by the electric sparks of their rays.

Napoleon's battles were repeated a thousand times in the nurseries with lead and paper soldiers. Beethoven's melodies agitated the souls of the young generation in their working and dreaming hours. When the shoes of the child became too small they were thrown aside; the lead and paper soldiers shared the same fate; but the melodious tones grew with the soul to more and more powerful chords. Beethoven's star shone brighter, while Napoleon's was already fading. Then we heard that Beethoven intended to destroy his great symphony called "Eroica." Napoleon, the consul, to whom Beethoven designed to dedicate this great work, had sunk to Napoleon the Emperor, and Beethoven felt ashamed.

Majesty of rank is often devoid of the grace and majesty of the soul. The chord e^b, g, b^b wherewith the bass solemnly introduced the third symphony (Eroica), and his inversions in the Scherzo b^b, e^b, g b^b, and in the last movement e, b, b, e, this echo of the Marseillaise suited no longer and should perish with it. Only then, when fate, in the icy deserts of Russia, clasped the grand General in its iron grip, and never loosened its hold until it had crushed him, did the composer of the Eroica comprehend that in the *marcia funebre* contained in this symphony, he had spoken in prophetic voice. The prophecy contained in the last movement was destined to be fulfilled in the latter half of this century.

As Beethoven poured out his soul in a prophetic epopee, so did Mozart embody his genius in his Don Giovanni. But as the sublime always acts more powerfully upon youth than knowledge and beauty, so likewise was the success of Beethoven greater than that of Mozart in this century. Altogether Mozart is generally appreciated better in riper years. "*La delicatesse du gout est une premiere nuance de la satiete.*"

Mendelssohn, whose compositions ever flowed smoothly and quietly, understood well how to tune his harmonica to Mozart's tuning-fork.

Q. You represent Beethoven as grave and solemn, and yet it appears he was not a great despiser of dances. Take, for instance, his A major symphony. Lively to overflowing, almost mad with frantic joy, is the first movement. Equal to a double quick-step, the last, about as the peasants of Saxony perform their dances, the Scherzo gay; and in the Andante, he even calls upon a lot of old bachelors and maiden-ladies, with their hoop accompaniment, to fall in and execute their *tours*?

A. What opposite views are often taken of the same thing by different minds! In the andante, in which you find so much humor, Marx observes the sober view of life, at first the peaceful and untroubled step, but growing ever more and more painful, and suffering, fighting the battle of life; yet, be this as it may, such music is ever successful, even in spite of the biting criticism of Maria v. Weber, and the ferocious attacks of Oulibischeff.

Q. A good dance is always successful, I believe?

A. Mendelssohn knew this, as he also understood Beethoven and the public, when he wrote his dance overture, "A Summer-night's Dream." Auber, Herold and others wrote dance overtures *en masse*, and we often find more piquant themes in them than Beethoven's A major symphony, or Mendelssohn's Summer-night's Dream can boast of, yet we do not prefer them for the concert.

All compositions for an orchestra, be they overture or symphony, must first contain a theme, which expresses the character of the principal composition. Second, the expansions of compositions in the style of a symphony, must, according to my opinion, originate from *one theme*, germinate from *one* seed, growing larger and stronger all the time, until the swelling bud bursts into a beautiful blossom; yet there must not be orange-blossoms on an oak-tree; all must fit harmoniously.

The theme, *sujet*, or *motive*, must be a fixed idea, such as "love;" it must be ever

present—the first at day-break, the last at night—no other impression must be strong enough to erase it.

If, by the blossom, you understand the creation of a second thought, often called the second theme, even this second theme ought to be governed by the first, even this blossom ought to glow in the same colors. It must be so twined around the heart of the composer, that nothing foreign could possibly enter it. Merely thematical productions are exercises for the pupil; compositions which merely contain parts composed by rule, are merely a musical exercise. Lobe certainly is wrong, if he thus teaches the art of composing.

True, it is easy to point out how one part belongs here, the other there, yet the composition must be a free expression of the soul.

Third—The finishing of the same. This must also be governed in its main parts by the predominating feeling, and only minor thoughts and impressions must be used by the composer to fill up or cast away.

Let us now turn, for illustration, to the theme of Wagner's overture to Faustus. In the introduction we first see it in the eighth measure, very moderate, in the dominant d minor, commencing with the notes a ā | b♭ b♭. a | g *sharp*, and headed "very expressive," concerning which Von Bulow observes, that it truly expresses the feeling and character of the last lines of the motto which Wagner chose at the heading:

> "Thus life to me a dire burden is;
> Existence I despise, for death I wish."

If we designate the above-mentioned theme by figure I. we must name the figure which already makes its appearance in the second measure, and which is of the utmost importance, to wit, d *sharp*, e, f, f, e, e, b, b, figure II., the first theme having been expressed by the violin, the second figure reappears again in the tenth measure, executed by the viola, growling like a furiously racked demon, while the wind instruments, flute, oboe and clarionet, "very expressive," and yet full of sympathizing sorrrow, intervene at the last quarter of the tenth measure with the motive, which we will call figure III. Figure II. continues rumbling in the quartette, relieved by another figure (IV.) descending from above, which is introduced by the second violin in the fourteenth measure. Figure IV. now extends itself further above a chromatic bass, until in the nineteenth measure, in d major, a clear and distinct new motive, gentle and forgiving in character (V.) makes its appearance.

These five motives which the composer so exquisitely leads before us, in his very moderate introduction, now receive the finishing-touch in the allegro. Thus speaks Von Bulow.

Truly, as Goethe says: "If you perform a piece, be sure to perform the same in pieces."

I will pass over the introduction, though I have as little taste for such "theme pieces" succeeding each other, as for Opera-overtures, such as that of Tannhäuser, where pilgrim-songs, the love-sick murmurings of the voluptuous Venus, and the tedious Count's drawling sorrow for his only daughter and heir, form a hash, which in the details, and in the heterogeneous compilation of the same, is unpalatable enough, but which is made unbearable by the soul-killing figures—no! not figures, but by the up and down strokes of monotonous bases, which continue for about sixty measures. Setting aside even all this, we may justly expect in the allegro the expansion of the principle theme I., yet we have no such thing; in place of the "idea" he produces after the first five measures a worthless figure, fit for accompaniment only, which is supported on its tottering basis by the twenty-seven times repeated downstroke of the conductor only.

Q. Excuse me; but the tone-picture, which Von Bulow, R. Wagner's friend and admirer, calls the forgiving voice (III), reappears twice in wind-instrument music?

A. According to Lobe's system. Borrow a measure or two from a theme, then a motive, which you may construct from this or that or a third figure, and you have, besides the required unity, the grandest variation.

Do you know, my young friend, what a composer understands by an exploded

idea? The technical! All who study the art of composing, as Lobe teaches it, may learn to become *compilers* but *not composers;* or they must drink elder-tea, till their visions appear black and blue to them, in order to evaporate the schooling they enjoyed. After twenty-seven measures of earthly smoke, there appears a solitary star, theme I., continuing for four whole measures, followed by a little more mist.

Q. No; I think Bulow says the mist is parted by a firm and punctuated motive.

A. If it is not firm, it is at least *fortissimo.* Enough, we again hear thirteen measures of unimportant music, concluded by d minor, followed by a new melody for a hautboy, which, as it repeats the two first notes of the first theme, may claim to be considered as belonging there, leading to a third in f major, in company with a tremulando, *à la Samiel,* crescendo and diminuendo. We have now arrived at the point where we may look for the second theme, "the blossom," as we before said, but alas, in vain your tortured soul waits, no blossoms! The thermometer sinks again! With the cadence we again hear theme I., after four measures we find ourselves once more in d *flat* major—no, in a minor, b *flat* major or b *flat* minor, or g minor, it is difficult to say which, for this part may be said to belong in the "most inseparably combined, the closest related family of all keys." Enough, we find ourselves after twenty-six measures exactly at the very place we started from, before the performance of twenty-six measures, namely, in f major.

This movement of twenty-six measures might be wholly thrown out, without one being any wiser—a possibility which, in every good composition, must be looked upon as a great fault, as all parts must be so closely united as to enforce the presence and support of each other.

We will now look at the second theme. In it no critic can find a fault. It unravels itself smoothly, and, after forty-nine measures, conducts us again to motive V. in the introduction, as likewise to figure II., which here does not frown quite so much.

Figure V. first appears in f, after twenty-two measures in g *flat* major, after fourteen more in A minor, after thirty-four in d minor, and after another thirty-nine measures we at last hear theme I. again, in the dominant of the bass, a Faustus with lantern jaws, sunken temples, sparse hair, but with a very, very magnificent bread-basket.

The blossom is larger than the whole tree. If it is not a miracle, it is a wonderful abortion. Are you now curious as to the second part? Oh! it almost appears like a fugue, the bass dies away, a fifth higher the cello commences, another fifth higher the viola in unison with the second violin; but as the composer has strayed already from d minor to b minor, he does not think it safe to stray further; the wind instruments continue by themselves in figure II.

Q. Bulow says the cello and viola united, once more introduce the principal theme.

A. Just so. After the bassoon has tried twice to begin the same, after about thirty measures of worldly ether, more devoid of stars than the South Pole, it is headed "wild!" The leading theme once more begins in the principal tonic (d minor), etc., afterwards enlarged, the first two notes converted, caught up by the cello and the trumpet, wherein the bass-trombone is expected to perform the high A, and after twenty-eight measures of "hated existence" the second theme in d major, together with the finale, appears like a short bright ray of the glorious sun on a misty winter day.

> "He, who reigns above my powers,
> Cannot shake the outer towers"—

is Wagner's motto, which he has justly chosen for the heading of his overture, and I attempt no alteration only at the conclusion, and close with—

> "In such music existence a burden is,
> The future I hate, for the End I wish."

Q. Bulow would also answer as Goethe:

> "To understand and write of living things,
> Try first to drive away the soul,
> The *parts* will then remain within your hand!"

A. I have never found fault with these

parts, excepting, perhaps, that I said the working out of the second theme is, in proportion to the first theme, too extensive; in fact, there is nothing of the future contained in the overture.

Q. No future?

A. I mean to say, no music of the future —not even a chromatic scale for the fundamental key—it moves entirely in the common form:

Principal theme—d minor;
Second theme—f major;
Return to fundamental key;
Second theme—d major, and conclusion in this key.

The finish and working up is neat and careful, and many pretty and uncommon effects occur therein; still I do not think the same in its proper place for a concert.

It inherits nothing of the Bach; the *piece* is well constructed, yet the *small pieces* cannot escape criticism. Even Beethoven, in the first movements of his *Eroica* makes us acquainted with all the parts he intends to work up, and in his c minor symphony he says plainly: Now observe; the notes g g g e *flat* compose the whole, nothing more. But after that it is a rushing flow, an unbroken ring and song, pressing breathlessly onward, which captivates and carries us along with its force. To express myself plainly, I may say that we can perceive the work *was done* before it began.

It is true, and I will not deny that even he applied the file to heighten its polish, yet the whole structure stood finished to his vision before even these first four notes were penned.

No doubt R. Wagner also imagined a picture before he painted it, but surely no musical one; the poetry was there—the music had to be manufactured. It is full of genius, and not untrue; but he does not allow sufficient freedom to the different instruments, and is, consequently, not sufficiently "obligato."

The parts succeed, instead of going in company or against each other.

Although now one, then another instrument catches up a thought, yet the whole appears more like a Quartette of Pleyel than one of Beethoven's—the overture is not thought out polyphonically. Many, however, do not know what Polyphonism is; it has been written about in many curious ways. The pupil will best learn to write music in a polyphonic manner, if, at the commencement, he invents at once a double-voiced movement, but in such a manner that one voice is not the subordinate of the other; both are equally necessary to represent the meaning of the thought he wishes to express.

In this manner he may or must continue in regard to the three or four-voiced movements likewise.

The addition of voices to a melody satisfactory in itself, be they ever so well flourished, cannot properly be called polyphonism.

Polyphonism, however, should be the ruling principle in all orchestral concert compositions, although in some points, for instance, in the second theme, homophony may take its place.

A well composed symphony or overture must not entertain the audience only, but every performing musician must feel that he is not an instrument or a machine, but a living and intelligent being.

The overture to Faustus so entirely ignores Polyphony, that it seems a virtual denial of its effectiveness and importance in orchestral composition.

Richard Wagner will never become a composer of instrumental music, but in his operas he has opened a new avenue, and his creations therein are something grand and sublime.

SCHOPENHAUER'S DOCTRINE OF THE WILL.

Translated from the German, by C. L. Bernays.

[We print below a condensed statement of the central doctrine of Arthur Schopenhauer. It is translated from his work entitled "*Ueber den Willen in der Natur*," 2d ed., 1854, Frankfort—pp. 19—23, and 63. To those familiar with the kernel of speculative truth, it is unnecessary to remark that the basis of the system herewith presented is thoroughly speculative, and resembles in some respects that of Leibnitz in the Monadology, printed in our last number. It is only an attempt to solve all problems through self-determination, and this in its immediate form as the will. Of course the immediateness (i. e. lack of development or realization) of the principle employed here, leads into difficulty, and renders it impossible for him to see the close relation he stands in to other great thinkers. Hence he uses very severe language when speaking of other philosophers. If the Will is taken for the "Radical of the Soul," then other forms of self-determination, e. g. the grades of knowing, will not be recognized as possessing substantiality, and hence the theoretical mind will be subordinated to the practical;—a result, again, which is the outcome of the Philosophy of Fichte. But Leibnitz seizes a more general *aperçu*, and identifies self-determination with cognition in its various stages; and hence he rises to the great principle of Recognition as the form under which all finitude is cancelled—all multiplicity preserved in the unity of the Absolute.—Editor.]

The idea of a soul as a metaphysical being, in whose absolute simplicity will and intellect were an indissoluble unity, was a great and permanent impediment to all deeper insight into natural phenomena. The cardinal merit of my doctrine, and that which puts it in opposition to all the former philosophies, is the perfect separation of the will from the intellect. All former philosophers thought will to be inseparable from the intellect; the will was declared to be conditioned upon the intellect, or even to be a mere function of it, whilst the intellect was regarded as the fundamental principle of our spiritual existence. I am well aware that to the future alone belongs the recognition of this doctrine, but to the future philosophy the separation, or rather the decomposition of the soul into two heterogeneous elements, will have the same significance as the decomposition of water had to chemistry. Not the soul is the eternal and indestructible or the very principle of life in men, but what I might call the Radical of the soul, and that is the *Will*. The so-called soul is already a compound; it is the combination of will and the *νοῦς*, intellect. The intellect is the secondary, the *posterius* in any organism, and, as a mere function of the brain, dependent upon the organism. The will, on the contrary, is primary, the *prius* of the organism, and the organism consequently is conditioned by it. For the will is the very "thing in itself," which in conception (that is, in the peculiar function of the brain) exhibits itself as an organic body. Only by virtue of the forms of cognition, that is, by virtue of that function of the brain—hence only in conception—one's body is something extended and organic, not outside of it, or immediately in self-consciousness. Just as the various single acts of the body are nothing but the various acts of the will portrayed in the represented world, just so is the shape of this body as a totality the image of its will as a whole. In all organic functions of the body, therefore, just as in its external actions, the will is the "*agens*." True physiology, on its height, shows the intellect to be the product of the physical organization, but true metaphysics show, that physical existence itself is the product, or rather the appearance, of a spiritual *agens*, to-wit, the will; nay, that matter itself is conditioned through conception, in which alone it exists. Perception and thought may well be explained by the nature of the organism; the will never can be; the contrary is true, namely, that every organism originates by and from the will. This I show as follows:

I therefore posit the will as the "thing in itself"—as something absolutely primitive; secondly, the simple visibility of the will, its objectivation as our body; and thirdly, the intellect as a mere function of a certain part of that body. That part (the brain) is the objectivated desire (or will) to know, which became represented; for the will, to reach its ends,

needs the intellect. This function again pre-supposes the whole world as representation; it therefore pre-supposes also the body as an object, and even matter itself, so far as existing only in representation, for an objective world without a subject in whose intellect it stands, is, well considered, something altogether unthinkable. Hence intellect and matter (subject and object) only relatively exist for each other, and in that way constitute the apparent world.

Whenever the will acts on external matter, or whenever it is directed towards a known object, thus passing through the medium of knowledge, then all recognize that the *agens*, which here is in action, is the will, and they call it by that name. Yet, that is will not less which acts in the inner process that precedes those external actions as their condition, which create and preserve the organic life and its substrate; and secretion, digestion, and the circulation of the blood, are its work also. But just because the will was recognized only while leaving the individual from which it started, and directing itself to the external world, which precisely for that purpose now appears as perception, the intellect was regarded as its essential condition, as its sole element, and as the very substance out of which it was made, and thereby the very worst *hysteron proteron* was committed that ever happened.

Before all, one should know how to discriminate between will and arbitrariness (*Wille und Willkühr*), and one should understand that the first can exist without the second. Will is called arbitrariness where it is lighted by intellect, and whenever motives or conceptions are its moving causes; or, objectively speaking, whenever external causes which produce an act are mediated by a brain. The motive may be defined as an external irritation, by whose influence an image is formed in the brain, and under the mediation of which the will accomplishes its effect, that is, an external act of the body. With the human species the place of that image may be occupied by a concept, which being formed from images of a similar kind, by omitting the differences, is no longer intuitive, but only marked and fixed by words. Hence as the action of motives is altogether independent of any contact, they therefore can measure their respective forces upon the will, on each other, and thereby permit a certain choice. With the animals, that choice is confined to the narrow horizon of what is visibly projected before them; among men it has the wide range of the *thinkable*, or of its concepts, as its sphere. Those movements, therefore, which result from motives, and not from causes, as in the inorganic world, nor from mere irritation, as with the plants, are called arbitrary movements. These motives pre-suppose knowledge, the medium of the motives, through which in this case causality is effected, irrespective of their absolute necessity in any other respect. Physiologically, the difference between irritation and motive may be described thus: Irritation excites a reaction *immediately*, the reaction issuing from the same part upon which the irritation had acted; whilst a motive is an irritation, which must make a circuit through the brain, where first an image is formed, and that image then originates the ensuing reaction, which now is called an act of the free will. Hence the difference between free and unfree movements does not concern the essential and primary, which in both is the will, but only the secondary, that is, the way in which the will is aroused; to-wit, whether it shows itself in consequence of some real cause, or of an irritation, or of a motive, that is, of a cause that had to pass through the organ of the intellect.

Free will or arbitrariness is only possible in the consciousness of men. It differs from the consciousness of animals in this, that it contains not only present and tangible representations, but abstract concepts, which, independent of the differences of time, act simultaneously and side by side, permitting thereby conviction or a conflict of motives; this, in the strictest sense of the word, is called free will. Yet this very free will or choice consists only in the victory of the stronger motive over a weaker in a given individual character, by which the ensuing action was determined, just as one impulse is overpowered by

a stronger counter impulse, whereby the effect nevertheless appears with the same necessity as the movement of a stone that has received an impulse. The great thinkers of all times agree in this decidedly; while, on the contrary, the vulgar will little understand the great truth, that the mark of our liberty is not to be found in our single acts, but in our existence itself, and in its very essence. Whenever one has succeeded to discriminate will from free will, or the arbitrary, and to consider the latter as a peculiar species of the former, then there is no more room for any difficulty in discovering the will also in occurrences wherein intelligence cannot be traced. * * * *

The will is the original. It has created the world, but not through the medium of an intellect either outside or inside of the world, for we know of the intellect only through the mediation of the animal world, the very last in creation. The will itself, the unintentional will which is discovered in everything, is the creator of the world. The animals, therefore, are organized in accordance with their mode of living, and their mode of living is not shaped in conformity with their organs; the structure of any animal is the result of its will to be what it is. Nature, which never lies, tells us the same in its *naive* way; it lets any being just kindle the first spark of its life on one of his equals, and then lets it finish itself before our eyes. The form and the movement it takes from its own self, the substance from outside. This is called growth and development. Thus even empirically do all beings stand before us as their own work; but the language of nature is too simple, and therefore but few understand it.

Cognition, since all motives are dependent on it, is the essential characteristic of the animal kingdom. When animal life ceases, cognition ceases also; and arrived at that point, we can comprehend the medium by which the influences from the external world on the movements of other beings are effected only by analogy, whilst the will, which we have recognized as the basis and as the very kernel of all beings, always and everywhere remains the same. On the low stage of the vegetable world, and of the vegetative life in the animal organizations, it is *irritation*, and in the inorganic world it is the mechanical relation in general which appears as the substitute or as the analogue of the intellect. We cannot say that the plants perceive the light and the sun, but we see that they are differently affected by the presence or absence of the sun, and that they turn themselves towards it; and though in fact that movement mostly coincides with their growth, like the rotation of the moon with its revolution, that movement nevertheless exists, and the direction of the growth of a plant is just in the same way determined and systematically modified as an action is by a motive. Inasmuch, therefore, as a plant has its wants, though not of the kind which require a sensorium or an intellect, something analogous must take their place to enable the will to seize at least a supply offered to it, if not to go in quest of it. This is the susceptibility for irritation, which differs from the intellect, in that the motive and subsequent act of volition are clearly separated from each other, and the clearer, the more perfect the intellect is; whilst at the mere susceptibility for an irritation, the feeling of the irritation and the resulting volition can no longer be discriminated. In the inorganic world, finally, even the susceptibility for irritation, whose analogy with the intellect cannot be mistaken, ceases, and there remains nothing but the varied reaction of the bodies against the various influences. This reaction is the substitute for the intellect. Whenever the reaction of a body differs from another, the influence also must be different, creating a different affection, which even in its dullness yet shows a remote analogy with the intellect. If, for instance, the water in an embankment finds an issue and eagerly precipitates itself through it, it certainly does not perceive the break, just as the acid does not perceive the alkali, for which it leaves the metal; yet we must confess that what in all these bodies has effected such sudden changes, has a certain resemblance with that which moves ourselves whenever we act in consequence of

an unexpected motive. We therefore see that the intellect appears as the medium of our motives, that is, as the medium of causality in regard to intellectual beings, as that which receives the change from the external world, and which must be followed by a change in ourselves, as the mediator between both. On this narrow line, balances the whole world as representation, i. e. that whole extensive world in space and time, which as such cannot be anywhere else but in our brain, just as dreams; for the periods of their duration stand on the very same basis. Whatever to the animals and to man is given by his intellect as a medium of the motives, the same is given to the plants by their susceptibility for irritation, and to inorganic bodies by their reaction on the various causes, which in fact only differ in respect to the degree of volition; for, just in consequence of the fact, that in proportion to their wants the susceptibility for external impressions was raised to such a degree in the animals that a brain and a system of nerves had to develop itself, did consciousness, moreover, originate as a function of this brain, and in this consciousness the whole objective world, whose forms (time, space and causality) are the rules for the exercise of this function. We therefore discover that the intellect is calculated only for the subjective, merely to be a servant of the will, appearing only "*per accidens*" as a condition of animal life, where motives take the place of irritation. The picture of the external world, which at this stage enters into the forms of time and space, is but the background on which motives represent themselves as ends; it is also the condition of the connection of the external objects in regard to space and causality, but yet is nothing else but the mediation and the tie between the motive and the will. What a leap would it be to take this picture to be the true, ultimate essence of things,—this image of the world, which originates accidentally in the intellect as a function of animal brains, whereby the means to their ends are shown them, and their ways on this planet cleared up! What a temerity to take this image and the connection of its parts to be the absolute rule of the world, the relations of the things in themselves—and to suppose that all that could just as well exist independently of our brain! And yet this supposition is the very ground on which all the dogmatical systems previous to Kant were based, for it is the implicit pre-supposition of their Ontology, Cosmology, Theology, and of all their Eternal Verities.

By this realistic examination we have gained very unexpectedly the *objective* point of view of Kant's immortal discovery, arriving by our empirical, physiological way to the same point whence Kant started with his transcendental criticism. Kant made the subjective his basis, positing consciousness; but from its *à priori* nature he comes to the result, that all that happens in it can be nothing else but representation. We, on the contrary, starting from the objective, have discovered what are the ends and the origin of the intellect, and to what class of phenomena it belongs. We discover in *our* way, that the intellect is limited to mere representations, and that what is exhibited in it is conditioned by the subject, that is, a *mundane phenomenon*, and that just in the same way the order and the connection of all external things is conditioned by the subject, and is never a knowledge of what they are in themselves, and how they may be connected with each other. We, in our way, like Kant in his, have discovered that the world as representation, balances on that narrow line between the external cause (motive) and the produced effect (act of will) of intelligent (animal) beings, where the clear discrimination of the two commences. *Ita res accendent lumina rebus.*

Our objective stand-point is realistic, and therefore conditioned, inasmuch as starting from natural beings as posited, we have abstracted from the circumstance that their objective existence pre-supposes an intellect, in which they find themselves as representations; but Kant's subjective and idealistic stand-point is equally conditioned, inasmuch as it starts from the intellect, which itself is conditioned by nature, in consequence of whose development up to the animal world it only comes into existence. Holding fast to this, our

realistic-objective stand-point, Kant's doctrine may be characterized thus: after Locke had abstracted the *rôle* of the senses, under the name of "secondary properties," for the purpose of distinguishing things in themselves from things as they appear, Kant, with far greater profundity, abstracted the *rôle* of the brain functions [conceptions of the understanding]—a less considerable *rôle* than that of the senses—and thus abstracted as belonging to the subjective all that Locke had included under the head of primary properties. I, on the other hand, have merely shown why all stands thus in relation, by exhibiting the position which the intellect assumes in the System of Nature when we start realistically from the objective as a datum, and take the WILL, of which alone we are immediately conscious, as the true που στω of all metaphysics—as the essence of which all else is only the phenomenon.

INTRODUCTION TO PHILOSOPHY.

CHAPTER VII.

COMPREHENSION AND IDEA.

I.

Everything, to be known, must be thought as belonging to a system. This result was the conclusion of Chapter VI. To illustrate: acid is that which hungers for a base; its sharp taste is the hunger itself; it exists only in a tension. Hence to think an acid we must think a base; the base is ideally in the acid, and is the cause of its sharpness. The union of the acid and base gives us a salt, and in the salt we cannot taste the acid nor the base distinctly, for each is thoroughly modified by the other, each is *cancelled*. We separate the acid and base again and there exist two contradictions—acid and base—each calling for the other, each asserting its complement to be itself. For the properties of a somewhat are its *wants*, i. e. what it lacks of the total.

Such elements of a total as we are here considering, have been called "*moments*" by Hegel. The total is the "*negative unity*." (See Chap. IV.)

In the illustration we have salt as the negative unity of the moments, acid and base. The unity is called *negative* because its existence destroys each of the moments by adding the other to it. After the negative unity exists, each of the moments is no longer in a tension, but has become thoroughly modified by the other. The negative unity is *ideal* when the moments are held asunder—it is then potential, and through it each moment has its own peculiar properties.

More generally: every somewhat is *determined* by another; its characteristic, therefore, is the manifestation of its other or of the complement which makes with it the total or negative unity.

The complete thought of any somewhat includes the phases or moments, as such, and their negative unity. This may properly be called the *comprehension*. To comprehend [*Begreifen*] we must seize the object in its totality; com-prehend = to seize together, just as con-ceive= to take together; but conception is generally used in English to signify a picture of the object more or less general. Not the totality, but only some of its characteristics, are grasped together in a conception. Hence conceptions are *subjective*, i. e. they do not correspond to the true object in its entirety; but comprehension is *objective* in the sense that everything in its true existence is a comprehension. With this distinction between conception and comprehension most people would deny, at once, the possibility of the latter as an act of human intelligence. Sensuous knowing—for the reason that it attributes validity to isolated objects—does not comprehend. Reflective knowing seizes the reciprocal relations, but not in the negative unity. Comprehension—whether one ever can arrive at it or not—should be the thought in its totality, wherein nega-

tive unity and moments are thought together. Thus a true comprehension is the thought of the self-determined, and we have not thoroughly comprehended any thing till we have traced it back through its various presuppositions to self-determination which must always be the form of the total. (See chapters IV. & V.)

II.

The name "Idea" is reserved for the deepest thought of Philosophy.* In *comprehension* we think a system of dependent moments in a negative unity. Thus in the comprehension the multiplicity of elements, thought in the moments, is destroyed in its negative unity, and there is, consequently, only one independent being or totality. Let, once, each of these moments develop to a totality, so that we have in each a repetition of the whole, and we shall have a comprehension of comprehensions—a system of totalities—and this is what Hegel means by "*Idee,*" or Idea. Plato arrives at this, but does not consistently develop it. He deals chiefly with the standpoint of comprehension, and hence has much that is *dialectical.* (The Dialectic is the process which arises when the abstract and incomplete is put under the form of the true, or the apodeictic. To refute a category of limited application, make it universal and it will contradict itself. Thus the "Irony" of Socrates consists in generously (!) assuming of any category all that his interlocutor wishes, and then letting it refute itself while h applies it in this and that particular in stance with the air of one who sincerely believes in it. Humor is of this nature; the author assumes the validity of the character he is portraying in regard to his weak points, and then places him in positions wherein these weaknesses prove their true nature.) Aristotle, on the other hand, writes from the standpoint of the *Idea* constantly, and therefore treats his subjects as systematic totalities independent of each other; this gives the appearance of empiricism to his writings. The following illustration of the relation of comprehension to idea may be of assistance here:

Let any totality=T be composed of elements, phases or moments = a + b + c + d, &c. Each of these moments, a, b, c, &c., differs from the others and from the total; they are in a negative unity just as acid and base are, in a salt. The assertion of the negative unity cancels each of the moments. The negative unity adds to *a* the *b*, *c*, and *d*, which it lacks of the total; for a=T—b—c—&c.; and so too b=T—a—c—d—&c., and c=T—a—b—&c. Each demands all the rest to make its existence possible, just as the acid cannot exist if its tension is not balanced by a base. So far we have the Comprehension. If, now, we consider these moments as being able to develop, like the Monads of Leibnitz, we shall have the following result: *a* will absorb *b*+*c*+*d*+ &*c.*, and thus become a totality and a negative unity for itself; *b* may do likewise, and thus the others. Under this supposition we have, instead of the first series of moments (a + b + c + d + &c.) a new series wherein each moment has developed to a total by supplying its deficiencies thus: a b c d &c., + b a c d &c., + c a b d &c., + d a b c &c. In the new series, each term is a negative unity and a totality, and hence no longer exists in a tension, and no longer can be cancelled by the negative unity. Such a system of terms would offer us a manifold of individuals, and yet a profound unity. This is the unity of the Idea, and it affords a concrete multiplicity. Leibnitz gives to his Monads

* The word "Idea" does not have the sense here given it, except in Hegel, and in a very few translations of him. For the most part the word is used, (c. g. in Schelling's Philosophy of Nature in this number,) as a translation for the German "*Begriff,*" which we call "*comprehension,*" adopting the term in this sense from the author of the "Letters on Faust." It will do no harm to use so expressive a word as comprehension in an objective sense as well as in a subjective one. The thought itself is *bizarre*, and not merely the word; it is useless to expect to find words that are used commonly in a speculative sense. One must seek a word that has several meanings, and grasp these meanings all together in one, to have the speculative use of a word. Spirit has formed words for speculative ideas by the deepest of instincts, and these words have been unavoidably split up into different meanings by the sensuous thinking, which always loses the connecting links.

the power of reflection, so that each is the mirror of the universe; hence, in each is found the whole, and the Totality is endlessly repeated; "everywhere the one and the all"—and this is the "preestablished harmony," no doubt. This is the highest point of view in philosophy—true multiplicity and true unity coexisting. Plato reaches it in his statement in the Timaeus, that "God has made the world most like himself, since he *in nowise possesses envy.*" The ultimate purpose of the universe is the reflection of God to himself. In this reflection, the existence of independent self-determining totalities is presupposed; to all else he is a negative unity, and therefore destructive. To the righteous, i. e. to those who perfect themselves by performing for themselves the function of negative unity, He says: "In you I am well pleased; I am reflected in you." But to the wicked he is a consuming fire, for they do not assume the function of negative unity, but leave it to be used toward them from outside. Thus, too, the lower orders of existence perish through this, that their negative unity is not within but without. If God is conceived merely as the negative unity, and the creature not as self-determining, we have the standpoint of Pantheism. It is the Brahm which becomes all, and all returns into him again. If we had such a God we should only *seem* to be, for when he looked at us and "placed us under the form of Eternity" we should vanish. But in culture each of us absorbs his "not me," just as "a," in the illustration given above, became a b c d &c. Its *a*-ness was destroyed by its modifying ("rounding off") its own peculiarity by the peculiarities of the rest, and thus becoming "cosmopolitan." This is justly esteemed the profoundest and most sacred dogma of the Christian Religion when stated as the doctrine of the Trinity. The completest unity there obtains of independent individualities. All higher forms of spirit repeat the same thought. Government, e. g. is the Legislative, the Judiciary, and the Executive. Resist the Judiciary and it can, in the exercise of its function, assume executive powers. Each power is the entire organism viewed from the standpoint of one of its phases, just as *a b c, b a c, c a b,* are the same totality, but with different starting points assumed.

The self-determining being is the being which is its own other, and hence is its own negative unity. Thus it can never be a simple moment of a higher being, but is essentially a *reflection* of it. Recognition is the highest deed; it belongs to the standpoint of the Idea. Upon the plane of comprehension, the unity and multiplicity are mutually destructive; upon the plane of Idea they are mutually affirmative. The more creatures in whom he can be reflected, the more affirmations of God there are. The human spirit grows solely through recognition.

Remark. This is the only standpoint that is absolutely affirmative—all others being more or less negative, and, as a consequence, self-opposed. The stage of *human culture* is the most concrete illustration of it. Three human beings—A, B, and C—meet and form a community. As physical beings they exclude, each the others. The more one eats, the less the others have to eat. But spiritually it is the reverse: each has a different experience, and their giving and taking, instead of diminishing any one's share, *increases* it. The experience of A is imparted to B, and conversely; and so also both share with C. By this, C grows through the culture of A and B, and becomes C B A; B develops to B C A, and A to A C B; all is gain: no loss, except of *poverty.* Limitation by another makes a finite being. But self-determination is the process of being one's own "other" or limit, and hence all self-determined beings are totalities or microcosms, which, though independent, reflect each other, i. e. they make themselves in the same image. Hence the "Prestablished Harmony" exists among such beings. Each is its own negative. Cognition or mind is the form of being which embodies this.

In culture we have an absolutely affirmative process, for the reason that the *negative,* involved in the cancelling of one's own idiosyncracies, is a negative of what

is already negative. Hence the unity of God is not in anywise impaired by the existence of a continually increasing number of perfected beings. In proportion to their perfection they reflect Him, and their complete self-determination is just that complete realization of Him which completes his self-consciousness. This has been called Pantheism by those who confound this standpoint with that of the Comprehension. Pantheism is impossible with a proper insight into the nature of self-consciousness. A blind force fulfilling its destiny, and giving rise to various orders of beings which are to be re-absorbed by it,—if one fancies this to be God, call him a Pantheist, for God is then merely a negative unity, and creation is only a series of *moments*. But if one considers God to be the Absolute Person, and deduces all Theology from His self-consciousness, as Hegel does, he cannot be called a Pantheist consistently by any one who believes in the Gospel of St. John. It is easy to see why Hegel has been and still is regarded as a Pantheist. When he asserts the self-consciousness of the creature to be the completion of the Divine self-consciousness, Hegel merely states the logical constituents of the Christian idea of the Trinity. The "creature" is the *Son*, which is "in the beginning." All time must have presented and still presents the development of creatures into self-conscious beings. Our planet began a short time since to do this. "The fullness of time had come," and the final stage of reflection (which must always have existed in the Universe) began on the earth, or, to state it theologically, "The Son was sent to redeem this world." To think that Hegel could regard God as becoming conscious in time—as passing from an unconscious state to a conscious one—is to suppose him the weakest of philosophers. *Self-consciousness* cannot be "in time," for it is the "form of eternity," and thus time is not relative to it. The "fleeting show" of History does not touch the self-consciousness of God, nor does it touch any self-conscious being "whose soul is builded far from accident."

CHAPTER VIII.

WHAT IS THE TRUE ACTUAL?

1. — *Reality and Potentiality.*

The immediate object before the senses undergoes change; the real becomes potential, and that which was potential becomes real. Without the potentiality we could have had no change. At first we are apt to consider the real as the entire existence and to ignore the potential; but the potential will not be treated thus. Whatever a thing *can* become is as valid as what it is already. The properties of a thing by which it exists for us, are its relations to other beings, and hence are rather its *deficiencies* than its being *per se*. Thus the sharpness in the acid was pronounced to be the hunger of the same for alkali; the sharper it was, the louder was its call for alkali. Thus the very concreteness of a thing is rather the process of its potentialities. To illustrate this: we have a circle of possibilities belonging to a thing—only one of them is real at a time; it is, for instance, water, whose potentialities are vapor, liquid, and solid. Its reality is only a part of its total being, as in the case of water it was only one-third of itself at any given temperature. Yet the real is throughout qualified by the potential. In change, the real is being acted upon by the potential under the form of "outside influences." The pyramid is not air, but the air continually acts upon it, and the pyramid is in a continual process of decomposition; its potentiality is continually exhibiting its nature. We know by seeing a thing undergo change what its potentialities are. In the process of change is manifested the activity of the potentialities which are thus negative to it. If a thing had no negative it would not change. The real is nothing but the surface upon which the potential writes its nature; it is the field of strife between the potentialities. The real persists in existence through the potential which is in continual process with it. Thus we are led to regard the product of the two as the constant. This we call *Actuality*.

II.—*Actuality.*

The actual is a process, and is ever the same; its two sides, are the real and the potential, and the real is manifested no more and no less than the potentialities, in the process which constantly goes on. The real is annulled by the potential, and the latter becomes the real, only to be again replaced. If in the circle of possibilities which make up the entire being of a thing, that which is real bears a small proportion to the rest, the real is very unstable, for the potentialities are to that extent actively negative to it. But let the sphere of the real be relatively large, and we have a more stable being—there is less to destroy it and more to sustain it—it is a higher order of being. If the whole circle of its being were real it would coincide with its actuality, it would be self-related, exist for itself, and this would be the existence of the *Idea.*

III.—*The Actual is the Rational.*

The highest aim is toward perfection; and this is pursued in the cancelling of the finite, partial or incomplete, by adding to it its other or complement—that which it lacks of the Total or Perfect. Since this complement is the *potential,* and since this potential is and can be the only agent that acts upon and modifies the real, it follows that all process is pursuant of the highest aim; and since the actual is the process itself, it follows that the actual is the realization of the Best or of the Rational. A somewhat has a low order of existence if the sphere of its reality is small compared to that of its potentiality. But the lower its order the more swift and sure are the potentialities in their work. Hence no matter how bad anything is, the very best thing is being wrought upon it. Seize the moments of the world-history, and state precisely what they lacked of the complete realization of spirit, and one will see clearly that each phase perished by having just that added to it which it most of all needed.

IV.—*"The Form of Eternity."*

To think according to Reason is to think things under the form of Eternity, says Spinoza (*Res sub quadam specie aeternitatis percipere*). The Form of Eternity is what we have found as the true actual. The Phenomenal world is the constant spectacle wherein each and all is placed under the form of Eternity. When this is done, all *immediate* (or mechanical) being appears in a state of transition; all *mediated* being appears as a merely relative, i. e. as existing in what lies beyond it; all *absolutely mediated* (i. e. self-determined) being appears in a state of development. In the first and second stages the individual loses its identity. In the third stage the process is one of unfolding, and hence the continual realizing of a more vivid personal identity. Thus the Form of Eternity is to the conscious being the realization of his Immortality.

A THOUGHT ON SHAKESPEARE.

By Anna C. Brackett.

To say that Shakespeare excels others by virtue of the genius which enables him to throw himself for the time completely into each of the characters he represents, is to say a very common-place thing, and yet it will bear repeating.

His spirit was so many-sided, so universal, that it was able to take all forms and perfectly to fit itself to each, so that he always gives us a consistent character. His personages are individuals whose every word agrees with every other they have spoken, and while the spirit which moves in them is Shakespeare, he is all, yet no one of them.

> "The water unchanged in every case,
> Doth take on the figure of the vase."

He does not consciously go to work to

fashion a character, nor does he ask himself what that character shall say under the given circumstances, but his soul, being capable of all, takes on for the time the form of the character, and then speaks the things which are most natural to itself in that form. So entirely is this the case, that a comparison of the way in which one of his personages conducts himself under different circumstances, is sure to amaze us as we discover the fine touches by which the unity of the character is preserved. Goethe's characters grow—are in a state of becoming. Shakespeare's are grown: they are crystallized. The problem with Goethe is, the development of a character through growth; Shakespeare's: given a certain character and a certain collision, how will the given character demean itself? The common man with an effort could tell what *he himself* would have done under such and such circumstances, but Shakespeare could have done *all things*, and grasping one side of himself he holds it, and shows it for one person, and another for another. He never confuses—never changes. The divine inspiration sways him. The power to do this, the Universal which can take on all and be all, is genius.

This is not claimed as new in any sense. I simply wish to illustrate its truth with regard to the suitors of Portia, by noticing how perfectly the feelings which each expresses after the result of his choice is apparent, are the outcome of the feelings which decided the choice.

The three sets of comments on the caskets and their mottoes, betray three entirely different men. Their minds move differently; they are actuated habitually by different motives, and the results of the same failure in Morocco and Arragon are noticeably different. They are placed in precisely the same circumstances. They are both disappointed, but observe how differently they demean themselves. Morocco wastes no words. His mood changes instantly from a doubting hope to despondency and heartfelt grief, so powerful that it deprives him of all speech. He goes at once. But Arragon speaks as if he had been deceived. First—"How much unlike art thou to Portia!" That is, I was led to suppose one thing; I have been misled. Then—"How much unlike my hopes!" but, indignation and wounded pride gaining the ascendency—"*and my deservings!*" He re-reads the motto, and grows more angry still. He has not been treated fairly, and at last, forgetting himself, he turns round to Portia with the fierce, direct question, "Are my deserts no better?" Portia shows her appreciation of his state of mind by her evasion, plainly intimating that he had gone too far in his manner of addressing her. His very words are rough and uncourteous in their abruptness. His question was rude because so personal. In his haste he has not even noticed the writing, which now surprises him, as, feeling her quiet rebuke, he turns back to the casket to hide his embarrassment, and he reads. During the reading he begins to be conscious that he has been angry without reason, and that he has not had control enough of himself to conceal the fact. That he is not a fool is shown by his consciousness that he has behaved like one in giving away to his temper, and as this consciousness begins to dawn on him, he is ashamed of himself for having been provoked, and desires to be gone as soon as possible. He has had a revelation of himself which is not agreeable, and he turns to depart, no longer angry with Portia, but so angry with himself that he almost forgets to bid the lady adieu. But suddenly reminded that she is there, he assumes again his usual, courtly, outside self, and half in apology for his anger and rudeness, which might have led her to suppose that he would forget his promise, half to recall himself to himself, he awkwardly ends the scene by assuring her that he means to keep his word.

Now, why should Morocco never for one instant lose his gentlemanly bearing, while Arragon so wholly forgets himself? Turn back to the comments before the choice, and we have the key at once.

In their remarks on the leaden chest we see at first how much more quickly than Morocco, Arragon rushes at conclusions. The former becomes at once thoughtful, and does not pass by even that unattractive metal without careful pausing. After

reading all three mottoes once, he reads slowly the inscription on the leaden casket again, and begins to repeat it a second time. He feels thoroughly how much depends on the choice, and is self-distrustful. Finding that he can gain no suggestion from the lady, he commends himself for help to the gods before he proceeds. He is not the man to be daunted by a threat, and thinks he detects in that very threat a false ring. He is conscious of high motives, but not in vanity, and he decides adversely, giving a reason. But Arragon, before surveying the whole ground, decides at once about the first he sees, and the summary way in which he dismisses all consideration of the leaden casket, savors strongly of self-esteem. There is a sort of bravado in the sudden words without a moment's pause: "You shall look fairer ere I give or hazard!" The very use of "shall" with the second person, forces into view the will of the speaker. He does not turn to Portia. He is quite capable of directing his own actions without help from any god.

As Morocco considers the silver, the principal thing that attracts his attention is its "virgin hue." (Remark that Arragon under the same circumstances calls it a "treasure house.") He again begins thoughtfully to repeat; and again mark the self-distrust. There is an exquisitely delicate touch of this in—

> "If thou be'st rated by thy *estimation*,
> Thou dost deserve enough."

Relying on the judgment of others, rather than on his own, but conscious too that there is good ground for the estimation in which he knows himself held, the chivalrous admiration with which he looks up to the woman he desires, comes in here suddenly with a doubt whether if all that is thought of him is deserved, it is enough to win a pearl of so great price. His conscious manhood refuses, however, to weaken itself by doubting, and he again repeats the clause on which he stopped before. He goes back to the thought of the estimation in which he is held; he thinks of his noble birth, of his princely fortune, of his graces, and qualities of breeding, and enumerating all these, he proves his title to a better nobility by the sudden thought that the love he bears her is enough to make him deserve her were she never so precious, and on that, and that alone, he rests his claim. But before deciding he will read again from the gold casket, and his exclamations on it are only a continuation of his previous thought. It seems perfectly plain to him that this must be the fortunate casket. In his generous love he forgets himself entirely, and as it were to show her how wholly he believes in her, he makes his selection here. Why should he be angry at the failure? He had no self-assertion to be wounded. If he deserved her, it was only because he loved her; and if he did not deserve her, it was only because she was more than any one could deserve.

As Arragon, after passing by the lead, turns to the gold, he begins to be a little more cautious, and repeats like Morocco. But his mind, instead of turning at once to Portia as the only prize in the world wholly desirable, begins from a lofty eminence of superiority to criticise others whom he calls the "fool multitude." He will not choose what many men desire, because he prefers to keep out of the ranks. No democrat, but a proud aristocrat is he, and so the gold casket is set aside. After reading from the next, he begins to criticise again. It seems as if he stood outside of all the world and coolly reviewed it. On consideration he is quite sure that there is no danger of his losing his place even if "true honor were purchased by the merit of the wearer," and basing his choice on his belief that he deserves success, he orders peremptorily the opening of the "treasure house."

Is it not most natural that with such feelings, such self-complacency, he should be angry when he finds he has made a mistake? Nothing can be more galling to a proud spirit than to discover that the estimation set upon him by others is lower than that he sets upon himself.

It was not our purpose to compare Bassanio's comments with the others. Let us say only that he evidently prizes sincerity above all other virtues, and prefers a leaden casket that is lead all through, to a golden one that is gold only on the outside, and so he wins the woman, who, as she shows us a moment afterwards, is sincere enough to deserve to be won.

LEONARDO DA VINCI'S "LAST SUPPER,"

AS TREATED BY GOETHE.

[The following extracts from Goethe's treatment of the master-piece of Leonardo da Vinci were read at a meeting of the St. Louis Art Society, pending the discussion of a fine engraving of this celebrated picture. The MS. kindly presented to us by the translator we print, in order to give to those unacquainted with the original an exhibition of Goethe's thorough manner of penetrating the spirit of a work of art.—EDITOR.]

The Last Supper * * * was painted upon the wall of the monastery *alle Grazie*, at Milan. The place where the picture is painted must first be considered, for here the skill of the artist appears in its most brilliant light. What could be fitter and nobler for a refectory than a parting meal, which should be an object of reverence to the whole world for all future time. Several years ago, when travelling, we beheld this dining-room still undestroyed. Opposite the entrance on the narrow side, stood the table of the prior, on both sides of him the tables of the monks, all of which were raised a step from the floor—and when the visitor turned round, he saw painted on the fourth, above the doors, which are of but moderate height, a fourth table, and Christ and his disciples seated at it, as if they belonged to the society. At meal times it must have been a telling sight, when the tables of the prior and Christ looked upon each other as two opposite pictures, and the monks at their places found themselves enclosed between them. And just on this account the skill of the artist was compelled to take the existing tables of the monks as a pattern. Also, the table-cloth, with its folds still visible with its worked stripes and tied corners, was taken from the wash-room of the monastery. The plates, dishes, cups, and other vessels, are like those which the monks used.

Here was no attempt at imitating an uncertain antiquated costume; it would have been highly improper to stretch out the holy company upon cushions in this place. No, the picture must be brought near to the present; Christ must take his last supper with the Dominicans at Milan. Also, in many other respects, the painting must have produced a great effect; the thirteen figures about ten feet above the floor, one-half larger than life-size, take up the space of twenty-eight feet in length. Only two whole figures can be seen at the opposite ends of the table, the rest are half-figures; and here, too, the artist found his advantage in the necessity of the circumstances. Every moral expression belongs to the upper part of the body, and the feet in such cases are everywhere in the way. The artist has created here twelve half-figures, whose laps and knees are covered by the table and table-cloth, but whose feet are scarcely visible in the modest twilight beneath. Let us now imagine ourselves in the place; let us consider the moral repose which prevails in such a monastic dining-hall, and let us admire the artist who has infused into his picture, powerful emotion, passionate movement, and at the same time has kept his work within the bounds of Nature, and thus brings it in close contrast with the nearest reality.

The means of excitement by which the artist arouses the quiet holy group, are the words of the Master: "There is one among you who shall betray me!" They are spoken—the whole company falls into disquiet; but he inclines his head, with looks cast down; the whole attitude, the motion of the arms, of the hands, everything repeats with heavenly submission the unhappy words: Yes, it is not otherwise, there is one among you who shall betray me!

Before we go farther, we must point out a happy device whereby Leonardo principally enlivened his picture; it is the motion of the hands; this device, however, only an Italian could discover. With his nation, the whole body is full of animation; every limb participates in the expression of feeling, of passion, even of thought. By various motions and forms of the hand, he expresses: "What do I

care!—Come hither!—This is a rogue! beware of him!—He shall not live long!—This is a main point!—Observe this well, my hearers!" To such a national peculiarity Leonardo, who observed every characteristic point with the closest attention, must have turned his careful eye. In this respect, the present picture is unique, and one can scarcely observe it enough. Every look and movement perfectly correspond, and at the same time there is a combined and contrasted position of the limbs, comprehensible at a glance, and wrought out in the most praiseworthy manner.

The figures on both sides of the Saviour may be considered by threes, and each of these again must be thought into a unity, placed in relation, and still held in connection with its neighbors. First, on the right side of Christ, are John, Judas, and Peter. Peter the most distant, in consonance with his violent character, when he hears the word of the Lord, hastens up behind Judas, who, looking up affrighted, bends forward over the table, and holds with his right hand firmly closed, the purse, but with the left makes an involuntary nervous movement, as if he would say: What's that? What does that mean? In the meanwhile Peter has with his left hand seized the right shoulder of John, who is inclined towards him, and points to Christ, and at the same time urges the beloved disciple to ask who the traitor is. He strikes a knife-handle, which he holds in his right hand, inadvertently into the ribs of Judas, whereby the affrighted forward movement, which upsets the salt-cellar, is happily brought out. This group may be considered as the one which was first thought out by the artist; it is the most perfect.

If now upon the right hand of the Lord immediate vengeance is threatened, with a moderate degree of motion, there arises upon his left the liveliest horror and detestation of the treachery. James, the elder, bends back from fear, extends his arms, stares with his head bowed down as one who sees before him the monster which he has just heard of. Thomas peers from behind his shoulder, and approaching the Saviour, raises the index of his right hand to his forehead. Philip, the third of this group, rounds it off in the loveliest manner; he has risen, bends toward the Master, lays his hands upon his breast, and declares with the greatest clearness: Lord, it is not I! Thou knowest it! Thou seest my pure heart. It is not I!

And now, the last three figures of this group give us new material for thought; they talk with one another about the terrible thing which they have just heard. Matthew, with a zealous motion, turns his face to the left toward his two companions; his hands, on the contrary, he stretches with rapidity towards his master, and thus, by the most ingenious artifice, unites his own group with the previous one. Thaddeus shows the most violent surprise, doubt and suspicion; he has laid his left hand open upon the table, and has raised the right in a manner as if he intended to strike his left hand with the back of the right—a movement which one still sees in men of nature when they wish to express at an unexpected occurrence: Have I not said so? Have I not always supposed it? Simon sits at the end of the table, full of dignity—we therefore see his whole figure; he, the eldest of all, is clothed with rich folds; his countenance and movements show that he is astonished and reflecting, not excited, scarcely moved.

If we now turn our eyes to the opposite end of the table, we see Bartholomew, who stands upon his right foot, with the left crossed over it; he is supporting his inclined body by resting both hands firmly upon the table. He listens, probably to hear what John will find out from the Lord; for, in general, the incitement of the favorite disciple seems to proceed from this entire side. James, the younger, beside and behind Bartholomew, lays his left hand upon Peter's shoulder, just as Peter lays his upon the shoulder of John, but James does so mildly, seeking explanation only, whereas Peter already threatens vengeance.

And thus, as Peter reaches behind Judas, so James the younger reaches behind Andrew, who, as one of the most important figures, shows with his half-raised arms, his expanded hands in front, a decided ex-

pression of horror, which appears only once in this picture, while in other works of less genius, and of less profound thought, it recurs unfortunately only too often.

COPIES GENERALLY.

Before we now come to imitations of our painting, of which the number amounts to about thirty, we must make some reference to the subject of copies generally. Such did not come into use until everybody confessed that art had reached its culminating point, whereupon, inferior talents, looking at the works of the greater masters, despaired of producing by their own skill anything similar, either in imitation of nature, or from the idea; and art, which now dwindled into mere handicraft, began to repeat its own creations. This inability on the part of most of the artists did not remain a secret to the lovers of art, who, not being able always to turn to the first masters, called upon and paid inferior talents, inasmuch as they preferred, in order not to receive something altogether destitute of skill, to order imitations of recognized works, with a view to being well served in some degree. This new procedure was favored, from reasons of illiberality and overhaste by owners no less than by artists, and art lowered itself advisedly by setting out with the purpose to copy.

In the fifteenth century, as well as in the previous one, artists entertained a high idea of themselves and their art, and did not readily content themselves with repeating the inventions of others; hence we find no real copies dating from that period—a circumstance to which every friend of the history of art will do well to give heed. Inferior arts no doubt made use of higher patterns for smaller works, as in the case of *Niello* and other enamelled work, and, of course, when from religious or other motives, a repetition was desired, people contented themselves with an accurate imitation, which only approximately expressed the movement and action of the original, without paying any close regard to form and color. Hence in the richest galleries we find no copy previous to the sixteenth century.

But now came the time, when, through the agency of a few extraordinary men—among whom our Leonardo must be reckoned and considered as the first—art in every one of its parts attained to perfection; people learned to see and to judge better, and now the desire for imitations of first-class work was not difficult to satisfy, particularly in those schools to which large numbers of scholars crowded, and in which the works of the master were greatly in request. And yet, at that time, this desire was confined to smaller works which could be easily compared with the originals and judged. As regards larger works, the case was quite different at that time from what it was at a later period, because the original cannot be compared with the copies, and also because such orders are rare. Thus, then, art, as well as its lovers, contented itself with copies on a small scale, and a great deal of liberty was allowed to the copyist, and the results of this arbitrary procedure showed themselves, in an overpowering degree, in the few cases in which copies on a large scale were desired. These indeed were generally copies of copies, and, what is more, generally executed from copies on a smaller scale, worked out far away from the original, often from mere drawings, or even perhaps from memory. Job-painters now increased by the dozen, and worked for lower prices; people made household ornaments of painting; taste died out; copies increased and darkened the walls of ante-chambers and staircases; hungry beginners lived on poor pay, by repeating the most important works on every scale; yea, many painters passed the whole of their lives in simply copying; but even then an amount of deviation appeared in every copy, either a notion of the person for whom it was painted, or a whim of the painter, or perhaps a presumptuous wish to be original.

In addition to this came the demand for worked tapestry, in which painting was not content to look dignified, except when tricked out with gold; and the most magnificent pictures were considered meagre and wretched, because they were grave and simple; therefore the copyist introduced buildings and landscapes in the back-

ground, ornaments on the dresses, aureoles or crowns around the heads, and further, strangly formed children, animals, chimeras, grotesques, and other fooleries. It often happened, also, that an artist, who believed in his own powers of invention, received by the will of a client who could not appreciate his capabilities, a commission to copy another person's work, and since he did so with reluctance, he wished to appear original here and there, and therefore made changes or additions as knowledge, or perhaps vanity, suggested. Such occurrences took place of course according to the demands of place and time. Many figures were used for purposes quite different from those for which they had been intended by their first producers. Secular subjects were, by means of a few additions, changed into religious ones; heathen gods and heroes had to submit to be martyrs and evangelists. Often also, the artist, for instruction or exercise to himself, had copied some figure from a celebrated work, and now he added to it something of his own invention in order to turn it into a saleable picture. Finally, we may certainly ascribe a part of the corruption of art to the discovery and abuse of copper-plate engravings, which supplied job-painters with crowds of foreign inventions, so that no one any longer studied, and painting at last reached such a low ebb that it got mixed up with mechanical works. In the first place, the copper-plate engravings themselves were different from the originals, and whoever copied them multiplied the changes according to his own or other peoples' conviction or whim. The same thing happened precisely in the case of drawings; artists took sketches of the most remarkable subjects in Rome and Florence, in order to produce arbitrary repetitions of them when they returned home.

COPIES OF THE SUPPER.

In view of the above, we shall be able to judge what is to be expected, more or less, of copies of the Supper, although the earliest were executed contemporaneously; for the work made a great sensation, and other monasteries desired similar works. Of the numerous copies consulted by the author [Vossi] we shall occupy ourselves here with only three, since the copies at Weimar are taken from them; nevertheless, at the basis of these lies a fourth, of which, therefore, we must first speak. *Marco d' Oggiono*, a pupil of Leonardo da Vinci's, though without any extensive talent, gained the praise of his school chiefly by his heads, although in them he is not always equal to himself. About the year 1510, he executed a copy on a small scale, intending to use it afterwards for a copy on a larger scale. It was, according to tradition, not quite accurate; he made it, however, the basis of a larger copy which is in the now suppressed monastery at Castellazzo, likewise in the dining-hall of the monks of those days. Everything about it shows careful work; nevertheless the usual arbitrariness prevails in the details. And although Vossi has not been able to say much in its praise, he does not deny that it is a remarkable monument, and that the character of several of the heads, in which the expression is not exaggerated, is deserving of praise. Vossi has copied it, and on comparison of the three copies we shall be able to pronounce judgment upon it from our own observation.

A second copy, of which we likewise have the heads copied before us, is found in fresco on the wall at Ponte Capriasca; it is referred to the year 1565, and ascribed to Pierro Lovino. Its merits we shall learn in the sequel; it has the peculiarity that the names of the figures are written underneath, a piece of foresight which aids us in arriving at a correct characterization of the different physiognomies.

The gradual destruction of the original we have described in sufficient detail, and it was already in a very wretched condition when, in 1612, Cardinal Frederico Borromeo, a zealous friend of art, endeavored to prevent the entire loss of the work, and commissioned a Milanese, Andrea Bianchi, surnamed Vespino, to execute a full-sized copy. This artist first tried his skill on a few of the heads; being successful in these, he proceeded and copied the whole of the figures, separately however, and afterwards put them together with the

greatest possible care; the picture is at present to be found in the Ambrosiana library at Milan, and lies mainly at the basis of the most recent copy, executed by Vossi. This was executed on the following occasion.

LATEST COPY.

The Kingdom of Italy was decreed, and Prince Eugène, following the example of Luigi Sforza, wished to glorify the beginning of his reign by patronizing the fine arts. Luigi had ordered a representation of the Last Supper of Leonardo; Eugène resolved to restore, as far as possible, the painting that had been going to wreck for three hundred years in a new picture, which, in order that it might be indestructible, was to be done in mosaic, for which preparation had been made in an already existing institution.

Vossi immediately receives the commission, and commences in the beginning of May, 1807. He finds it advisable to execute a full-sized cartoon, takes up anew the studies of his youth, and applies himself entirely to Leonardo, studies his art-remains and his writings, particularly the latter, because he is persuaded that a man who has produced such splendid works must have worked on the most decided and advantageous principles. He had made drawings of the heads in the copy at Ponte Capriasca, as well as of some other parts of it, likewise of the heads and hands of the Castellazzo copy, and of that of Bianchi. Then he makes drawings of everything coming from Da Vinci himself, and even of what comes from some of his contemporaries. Moreover he looks about for all the extant copies, and succeeds in making more or less acquaintance with twenty-seven; drawings and manuscripts of Da Vinci's are kindly sent to him from all quarters. In the working out of his cartoon, he adheres principally to the Ambrosiana copy; it alone is as large as the original. Bianchi, by means of thread-nets and transparent paper, had endeavored to give a most accurate copy of the original, which, although already very much injured, was not yet painted over.

In the end of October, 1807, the cartoon is ready; canvass grounded uniformly in one piece, and the whole immediately sketched out. Hereupon, in order in some measure to regulate his tints, Vossi painted the small portion of sky and landscape, which, on account of the depth and purity of the colors in the original, had still remained fresh and brilliant. Hereupon he paints the head of Christ and those of the three apostles at his left, and as for the dresses, he first paints those about whose colors he had first arrived at certainly, with a view to selecting the rest according to the principles of the master and his own taste. Thus he covered the whole of the canvass, guided by careful reflection, and kept his colors of uniform height und strength.

Unfortunately, in this damp, deserted place, he was seized with an illness which compelled him to put a stop to his exertions; nevertheless, he employed this interval in arranging drawings, copper-plate engravings, partly with a view to the Supper itself, partly to other works of the master; at the same time he was favored by fortune, which brought him a collection of drawings, purporting to come from Cardinal Cæsar Monti, and containing, among other treasures, remarkable productions of Leonardo himself. He studied even the authors contemporaneous with Leonardo, in order to make use of their opinions and wishes, and looked about him for everything that could further his design. Thus he took advantage of his sickness, and at last attained strength to set about his work anew.

No artist or friend of art will leave unread the account of how he managed the details, how he thought out the characters of the faces and their expression, and even the motions of the hands, and how he represented them. In the same manner he thinks out the dishes, the room, the background, and shows that he has not decided upon any part without the strongest reasons. What care he takes about representing the feet under the table in correct attitudes, because this portion of the original had long been destroyed, and in the copies had been carelessly treated!

* * * * *

Of the relation of the two copies—the

merits of the third can be shown only to the eye, not to the mind in words—we shall state in a few words the most essential and most decided points, until we shall be fortunate enough, as we shall perhaps one day be, to be able to lay copies of these interesting sheets before the friends of art.

COMPARISON.

St. Bartholomew, manly youth, sharp profile, compressed, clear face, eyelid and brow pressed down, mouth closed, as if listening with suspicion, a character completely circumscribed within itself. In Vespino's copy no trace of individual characteristic features, a general kind of drawing-book face, listening with open mouth. Vossi has approved of this opening of the lips, and retained it, a procedure to which we should be unable to lend our assent.

St. James the younger, likewise profile, relationship to Christ unmistakable, receives from the protruded, slightly opened lips, something individual, which again cancels this similarity. According to Vespino, almost an ordinary, academical Christ, the mouth opened rather in astonishment than in inquiry. Our assertion that Bartholomew must have his mouth close, receives support from the fact that his neighbor has his mouth open. Such a repetition Leonardo would never have endured; on the contrary, the next figure,

St. Andrew has his mouth shut. Like persons advanced in life, he presses the lower lip rather against the upper. In the copy of Marco, this head has something peculiar, not to be expressed in words; the eyes are introverted; the mouth, though shut, is still *naïve*. The outline of the left side against the back ground forms a beautiful silhouette; enough of the other side of the forehead (eye, nose and beard) is seen to give the head a roundness and a peculiar life; on the contrary, Vespino suppresses the left eye altogether, but shows so much of the left temple and of the side of the beard as to produce in the uplifted face a full bold expression, which is indeed striking, but which would seem more suitable to clenched fists than to open hands stretched forward.

Judas locked up within himself, frightened, looking anxiously up and back, profile strongly dented, not exaggerated, by no means an ugly formation; for good taste would not tolerate any real monster in the proximity of pure and upright men. Vespino, on the other hand, has actually represented such a monster, and it cannot be denied that, regarded by itself, this head has much merit; it expresses vividly a mischievously bold malignity, and would make itself eminently conspicuous in a mob triumphing over an *Ecce Homo*, and crying out "Crucify! crucify!" It might be made to pass for Mephistopheles in his most devilish moment. But of affright or dread, combined with dissimulation, indifference and contempt, there is not a trace; the bristly hair fits in with the *tout ensemble* admirably; its exaggeration, however, is matched only by the force and violence of the rest of Vespino's heads.

St. Peter.—Very problematical features. Even in Marco, it is merely an expression of pain; of wrath or menace there is no sign; there is also a certain anxiety expressed, and here Leonardo may not have been at one even with himself; for cordial sympathy with a beloved master, and threatening against a traitor, are with difficulty united in one countenance. Nevertheless, Cardinal Borromeo asserts that he saw such a miracle in his time. However pleasant it might be to believe this, we have reason to suppose that the art-loving cardinal expressed his own feeling rather than what was in the picture; for otherwise we should be unable to defend our friend Vespino, whose Peter has an unpleasant expression. He looks like a stern Capuchin monk, whose Lent sermon is intended to rouse sinners. It is strange that Vespino has given him bushy hair, since the Peter of Marco shows a beautiful head of short, curled tresses.

St. John is represented by Marco in the spirit of Da Vinci; the beautiful roundish face, somewhat inclined to oval, the hair smooth towards the top of the head, but curling gently downwards, particularly where it bends round Peter's inserted hand, are most lovely; what we see of the dark of the eye is turned away from Peter —a marvellously fine piece of observation,

in that while he is listening with the intensest feeling to the secret speech of his neighbor, he turns away his eyes from him. According to Vespino, he is a comfortable-looking, quiet, almost sleepy youth, without any trace of sympathy.

We turn now to the left side of Christ, in order that the figure of the Saviour may come last in our description.

St. Thomas' head and right hand, whose upraised fore-finger is bent slightly toward his brow to imply reflection. This movement, which is so much in keeping with a person who is suspicious or in doubt, has been hitherto misunderstood, and a hesitating disciple looked upon as threatening. In Vespino's copy, likewise, he is reflective enough, but as the artist has again left out the retreating right eye, the result is a perpendicular, monotonous profile, without any remnant of the protruding, searching elements of the older copies.

St. James the Elder.—The most violent agitation of the features, the most gaping mouth, horror in his eye; an original venture of Leonardo's; yet we have reason to believe that this head, likewise, has been remarkably succesful with Marco. The working out is magnificent, whereas in the copy of Vespino all is lost; attitude, manner, mien, everything has vanished, and dwindles down into a sort of indifferent generality.

St. Philip, amiable and invaluable, resembles Raffaelle's youths, collected on the left side of *The School of Athens* about Bramante. Vespino has, unfortunately, again suppressed the right eye, and as he could not deny that there was something more than profile in the thing, he has produced an ambiguous, strangely inclined head.

St. Matthew, young, of undesigning nature, with curly hair, an anxious expression in the slightly opened mouth, in which the teeth, which are visible, express a sort of slight ferocity in keeping with the violent movement of the figure. Of all this nothing remains in Vespino; he gazes before him, stiff and expressionless; one does not receive the remotest notion of the violent movement of the body.

St. Thaddeus, according to Marco, is likewise quite an invaluable head; anxiety, suspicion, vexation, are expressed in every feature. The unity of this agitation of the countenance is extremely fine, and is entirely in keeping with the movement of the hands which we have already explained. In Vespino, everything is again reduced to a general level; he has also made the head still more unmeaning by turning it too much towards the spectator, whereas, according to Marco, hardly a quarter of the left side is seen, whereby the suspicious, askance-looking element is admirably portrayed.

St. Simon the Elder, wholly in profile, placed opposite the likewise pure profile of young Matthew. In him the protruding under lip which Leonardo had such a partiality for in old faces, is most exaggerated; but, along with the grave, overhanging brow, produces the most wonderful effect of vexation and reflection, in sharp contrast with the passionate movement of young Matthew. In Vespino he is a good-natured old man in his dotage, incapable of taking any interest in even the most important occurrence that might take place in his presence.

Having thus now thrown light upon the apostles, we turn to the form of *Christ* himself. And here again we are met by the legend, that Leonardo was unable to finish either Christ or Judas, which we readily believe, since, from his method, it was impossible for him to put the last touch to those two extremes of portraiture. Wretched enough, in the original, after all the darkening processes it had to undergo, may have been the appearance presented by the features of Christ, which were only sketched. How little Vespino found remaining, may be gleaned from the fact that he brought out a colossal head of Christ, quite at variance with the purpose of Da Vinci, without paying the least attention to the inclination of the head, which ought of necessity to have been made parallel with the inclination of John's. Of the expression we shall say nothing; the features are regular, good-natured, intelligent, like those we are accustomed to see in Christ, but without the very smallest particle of sensibility, so that we should

almost be unable to tell what New Testament story this head would be welcome to.

We are here met and aided by the circumstance that connoisseurs assert, that Leonardo himself painted the head of the Saviour at Castellazzo, and ventured to do in another's work what he had not been willing to undertake in his own principal figure. As we have not the original before us, we must say of the copy that it agrees entirely with the conception which we form of a noble man whose breast is weighed down by poignant suffering of soul, which he has endeavored to alleviate by a familiar word, but has thereby only made matters worse instead of better.

By these processes of comparison, then, we have come sufficiently near the method of this extraordinary artist, such as he has clearly explained and demonstrated it in writings and pictures, and fortunately it is in our power to take a step still further in advance. There is, namely, preserved in the Ambrosiana library a drawing incontestably executed by Leonardo, upon bluish paper, with a little white and colored chalk. Of this the chevalier Vossi has executed the most accurate *fac-simile*, which is also before us. A noble youthful face, drawn from nature, evidently with a view to the head of Christ at the Supper. Pure, regular features, smooth hair, the head bent to the left side, the eyes cast down, the mouth half opened, the *tout ensemble* brought into the most marvellous harmony by a slight touch of sorrow. Here indeed we have only the man who does not conceal a suffering of soul, but the problem, how, without extinguishing this promise, at the same time to express sublimity, independence, power, the might of godhead, is one which even the most gifted earthly pencil might well find hard to solve. In this youthful physiognomy which hovers between Christ and John, we see the highest attempt to hold fast by nature when the supermundane is in question.

PAUL JANET AND HEGEL.*

[In the following article the passages quoted are turned into English, and the original French is omitted for the sake of brevity and lucid arrangement. As the work reviewed is accessible to most readers, a reference to the pages from which we quote will answer all purposes.—EDITOR.]

Since the death of Hegel in 1831, his philosophy has been making a slow but regular progress into the world at large. At home in Germany it is spoken of as having a right wing, a left wing, and a centre; its disciples are very numerous when one counts such widely different philosophers as Rosenkrantz, Michelet, Kuno Fischer, Erdmann, J. H. Fichte, Strauss, Feuerbach, and their numerous followers. Sometimes when one hears who constitute a "wing" of the Hegelian school, he is reminded of the "*lucus a non*" principle of naming, or rather of misnaming things. But Hegelianism has, as we said, made its way into other countries. In France we have the Æsthetics "partly translated and partly analyzed," by Professor Bénard; the logic of the small Encyclopædia, translated with copious notes, by Professor Vera, who has gone bravely on, with what seems with him to be a work of love, and given us the "Philosophy of Nature" and the "Philosophy of Spirit," and promises us the "Philosophy of Religion"—all accompanied with abundant introduction and commentary. We hear of others very much influenced by Hegel: M. Taine, for example, who writes brilliant essays. In English, too, we have a translation of the "Philosophy of History," (in Bohn's Library;) a kind of translation and analysis of the first part of the third volume of the Logic, (Sloman & Wallon, London, 1855); and an extensive and elaborate work on "The Secret of Hegel," by James Hutchison Stirling. We must not forget to mention a translation of Schwegler's History of Philosophy—a work drawn princi-

* "Essai sur la dialectique dans Platon et dans Hegel," par Paul Janet, Membre de L'Institut, professeur à la Faculté des lettres de Paris.—Paris, (Ladrange,) 1860.

pally from Hegel's labors—by our American Professor Seelye; and also (just published) a translation of the same book by the author of the "Secret of Hegel." Articles treating of Hegel are to be found by the score—seek them in every text-book on philosophy, in every general Cyclopædia, and in numerous works written for or against German Philosophy. Some of these writers tell us in one breath that Hegel was a man of prodigious genius, and in the next they convict him of confounding the plainest of all common sense distinctions. Some of them find him the profoundest of all thinkers, while others cannot "make a word of sense out of him." There seems to be a general understanding in this country and England on one point: all agree that he was a Pantheist. Theodore Parker, Sir William Hamilton, Mansell, Morell, and even some of the English defenders of Hegelianism admit this. Hegel holds, say some, that God is a *becoming;* others say that he holds God to be *pure being.* These men are careful men apparently—but only *apparently,* for it must be confessed that if Hegel has written any books at all, they are, every one of them, devoted to the task of showing the inadequacy of such abstractions when made the highest principle of things.

The ripest product of the great German movement in philosophy, which took place at the beginning of this century, Hegel's philosophy is likewise the concretest system of thought the world has seen. This is coming to be the conviction of thinkers more and more every day as they get glimpses into particular provinces of his labor. Bénard thinks the Philosophy of Art the most wonderful product of modern thinking, and speaks of the Logic—which he does not understand—as a futile and perishable production. Another thinks that his Philosophy of History is immortal, and a third values extravagantly his Philosophy of Religion. But the one who values his Logic knows how to value all his labors. The History of Philosophy is the work that impresses us most with the unparalleled wealth of his thought; he is able to descend through all history, and give to each philosopher a splendid thought as the centre of his system, and yet never is obliged to confound different systems, or fail in showing the superior depth of modern thought. While we are admiring the depth and clearness of Pythagoras, we are surprised and delighted to find the great thought of Heraclitus, but Anaxagoras is a new surprise; the Sophists come before us bearing a world-historical significance, and Socrates, Plato, and Aristotle lead us successively to heights such as we had not dreamed attainable by any thinking.

But thought is no *immediate* function, like the process of breathing or sleeping, or fancy-making: it is the profoundest mediation of spirit, and he who would get an insight into the speculative thinkers of whatever time, must labor as no mere flesh and blood can labor, but only as spirit can labor: with agony and sweat of blood. A philosophy which should explain the great complex of the universe, could hardly be expected to be transparent to uncultured minds at the first glance. Thus it happens that many critics give us such discouraging reports upon their return from a short excursion into the true wonder-land of philosophy. The Eternal Verities are miraculous only to those eyes which have gazed long upon them after shutting out the glaring sunlight of the senses.

Those who criticise a philosophy must imply a philosophical method of their own, and thus measure themselves while they measure others. A literary man who criticises Goethe, or Shakespeare, or Homer, is very apt to lay himself bare to the shaft of the adversary. There are, however, in our time, a legion of writers who pass judgment as flippantly upon a system of the most comprehensive scope—and which they confess openly their inability to understand—as upon a mere opinion uttered in a "table-talk." Even some men of great reputation give currency to great errors. Sir William Hamilton, in his notes to Reid's Philosophy of "Touch," once quoted the passage from the second part of Fichte's *Bestimmung des Menschen,* (wherein onesided idealism is pushed to its downfall,) in order to show that

Fichte's Philosophy ended in Nihilism. The *Bestimmung des Menschen* was a mere popular writing in which Fichte adopted the Kantian style of exhibiting the self-refutation of sense and reflection, in order to rest all ultimate truth in the postulates of the Practical Reason. Accordingly he shows the practical results of his own system in the third part of the work in question, and enforces the soundest ethical views of life. He never thought of presenting his theoretical philosophy in that work. Thus, too, in Hamilton's refutation of Cousin and Schelling: he polemicises against all "Doctrines of the Absolute," saying that *to think is to limit; hence to think God would be to determine or limit Him;* and hence is inferred the impossibility of thinking God as he truly is. This, of course, is not pushed to its results by his followers, for then its skeptical tendency would become obvious. Religion demands that we shall do the Will of God; this Will must, therefore, be known. But, again, Will is the realization or self-determination of one's nature—from it the character proceeds. Thus in knowing God's will we know his character or nature. If we cannot do this at all, no religion is possible; and in proportion as Religion is possible, the Knowledge of God is possible.

If it be said that the Absolute is unthinkable, in this assertion it is affirmed that all predicates or categories of thought are inapplicable to the Absolute, for to think is to predicate of some object, the categories of thought; and in so far as these categories apply, to that extent is the Absolute thinkable. Since *Existence* is a category of thought, it follows from this position that to predicate existence of the Absolute is impossible; "a questionable predicament" truly for the Absolute. According to this doctrine—that all thought is limitation—God is made Pure Being, or Pure Thought. This is also the result of Indian Pantheism, and of all Pantheism; this doctrine concerning the mere negative character of thought, in fact, underlies the Oriental tenet that consciousness is finitude. To be consistent, all Hamiltonians should become Brahmins, or, at least, join some sect of modern Spiritualists, and thus embrace a religion that corresponds to their dogma. However, let us not be so unreasonable as to insist upon the removal of inconsistency—it is all the good they have.

After all this preliminary let us proceed at once to examine the work of Professor Paul Janet, which we have named at the head of our article: "*Essai sur la dialectique dans Platon et dans Hegel.*"

After considering the Dialectic of Plato in its various aspects, and finding that it rests on the principle of contradiction, M. Janet grapples Hegel, and makes, in order, the following points:

I. Terminology.—He tells us that the great difficulty that lies in the way of comprehending German Philosophy is the abstract terminology employed, which is, in fact, mere scholasticism preserved and applied to modern problems. No nation of modern times, except the Germans, have preserved the scholastic form. He traces the obscurity of modern German philosophy to "Aristotle subtilized by the schools." This he contrasts with the "simple and natural philosophy of the Scotch." [This "simplicity" arises from the fact that the Scotch system holds that immediate sensuous knowing is valid. Of course this implies that they hold that the immediate existence of objects is a true existence—that whatever is, exists thus and so without any further grounds. This is the denial of all philosophy, for it utterly ignores any occasion whatever for it. But it is no less antagonistic to the "natural science" of the physicist: he, the physicist, finds the immediate object of the senses to be no permanent or true phase, but only a transitory one; the object is involved with other beings—even the remotest star—and changes when they change. It is force and matter (two very abstract categories) that are to him the permanent and true existence. But force and matter cannot be seen by the senses; they can only be thought.] Our author proceeds to trace the resemblance between Hegel and Wolff: both consider and analyze the pure concepts, beginning with Being. To M. Janet this resemblance goes for much, but he admits that "Hegel

has modified this order (that of Wolff) and rendered it more systematic." If one asks "*How* more systematic?" he will not find the answer. "The scholastic *form* is retained, but not the *thought*," we are told. That such statements are put forward, even in a book designed for mere surface-readers may well surprise us. That the mathematical method of Wolff or Spinoza — a method which proceeds by definitions and external comparison, holding meanwhile to the principle of contradiction — that such a method should be confounded with that of Hegel which proceeds dialectically, i. e. through the internal movement of the categories to their contradiction or limit, shows the student of philosophy at once that we are dealing with a *littérateur*, and not with a philosopher. So far from retaining the form of Wolff it is the great object of Hegel (see his long prefaces to the "Logik" and the "Phänomenologie des Geistes") to supplant that form by what he considers the true method—that of the *objective* itself. The objective method is to be distinguished from the arbitrary method of external reflection which selects its point of view somewhere outside of the object considered, and proceeds to draw relations and comparisons which, however edifying, do not give us any exhaustive knowledge. It is also to be distinguished from the method of mere empirical observation which collects without discrimination a mass of characteristics, accidental and necessary, and never arrives at a vivifying soul that unites and subordinates the multiplicity. The objective method seizes somewhat in its definition and traces it through all the phases which necessarily unfold when the object is placed in the form of *relation to itself*. An object which cannot survive the process of self-relation, perishes, i. e. it leads to a more concrete object which is better able to endure. This method, as we shall presently see, is attributed to Plato by M. Janet.

The only resemblance that remains to be noted between the scholastics and Hegel is this: they both treat of subtle distinctions in thought, while our modern "common sense" system goes only so far as to distinguish very general and obvious differences. This is a questionable merit, and the less ado made about it by such as take pride in it, the better for them.

Our author continues: "The principal difficulty of the system of Kant is our ignorance of the ancient systems of logic. The Critique of Pure Reason is modelled on the scholastic system." Could we have a more conclusive refutation of this than the fact that the great professors of the ancient systems grossly misunderstand Kant, and even our essayist himself mistakes the whole purport of the same! Hear him contrast Kant with Hegel: "Kant sees in Being only the form of Thought, while Hegel sees in Thought only the form of Being." This he says is the great difference between the Germans and French, interpreting it to mean: "that the former pursues the route of deduction, and the latter that of experience"!

He wishes to consider Hegel under three heads: 1st, The Beginning; 2d, the dialectical deduction of the Becoming, and 3d, the term Dialectic.

II. The Beginning.—According to M. Janet, Hegel must have used this syllogism in order to find the proper category with which to commence the Logic.

(a) The Beginning should presuppose nothing;

(b) Pure Being presupposes nothing;

(c) Hence Pure Being is the Beginning.

This syllogism he shows to be inconclusive: for there are two beginnings, (a) in the order of knowledge, (b) in the order of existence. Are they the same? He answers: "No, the thinking being—because it thinks—knows itself before it knows the being which it thinks." Subject and object being identical in that act, M. Janet in effect says, "it thinks itself before it thinks itself"—an argument that the scholastics would hardly have been guilty of! The beginning is really made, he says, with internal or external *experience*. He quotes (page 316) from Hegel a passage asserting that *mediation* is essential to knowing. This he construes to mean that "the determined or concrete (the world of experience) is the essential condition of know-

ing!" Through his misapprehension of the term "mediation," we are prepared for all the errors that follow, for "mediation in knowing" means with Hegel that it involves a *process*, and hence can be true only in the form of a system. The "internal and external experience" appertains to what Hegel calls immediate knowing. It is therefore not to be wondered at that M. Janet thinks Hegel contradicts himself by holding Pure Being to be the Beginning, and afterwards affirming mediation to be necessary. He says (page 317), "In the order of knowing it is the mediate which is necessarily first, while in the order of existence the immediate is the commencement." Such a remark shows him to be still laboring on the first problem of Philosophy, and without any light, for no *Speculative* Philosopher (like Plato, Aristotle, Leibnitz, or Hegel) ever held that Pure Being—or the immediate—is the first in the order of existence, but rather that God or Spirit (self-thinking, "pure act," Νοῦς, "Logos," &c.) is the first in the order of existence. In fact, M. Janet praises Plato and Aristotle for this very thing at the end of his volume, and thereby exhibits the unconsciousness of his procedure. Again, "The pure thought is the end of philosophy, and not its beginning." If he means by this that the culture of consciousness ends in arriving at pure thought or philosophy, we have no objection to offer, except to the limiting of the application of the term Philosophy to its preliminary stage, which is called the Phenomenology of Spirit. The arrival at pure thought marks the beginning of the use of terms in a universal sense, and hence is the beginning of philosophy proper. But M. Janet criticises the distinction made by Hegel between Phenomenology and Psychology, and instances Maine de Biran as one who writes Psychology in the sense Hegel would write Phenomenology. But M. Biran merely manipulates certain unexplained phenomena,—like the Will, for example—in order to derive categories like force, cause, &c. But Hegel shows in his Phenomenology the dialectical unfolding of consciousness through all its phases, starting from the immediate certitude of the senses. He shows how certitude becomes knowledge of truth, and wherein it differs from it. But M. Janet (p. 324) thinks that Hegel's system, beginning in empirical Psychology, climbs to pure thought, "and then draws up the ladder after it."

III. The Becoming.—We are told by the author that consciousness determining itself as Being, determines itself as *a* being, and not as *the* being. If this be so we cannot think *pure being* at all. Such an assertion amounts to denying the universal character of the Ego. If the position stated were true, we could think neither being nor any other object.

On page 332, he says, "This contradiction (of Being and non-being) which in the ordinary logic would be the negative of the *posited notion*, is, in the logic of Hegel, only an excitant or stimulus, which somehow determines spirit to find a third somewhat in which it finds the other conciliated." He is not able to see any procedure at all. He sees the two opposites, and thinks that Hegel empirically hunts out a concept which implies both, and substitutes it for them. M. Janet thinks (pp. 336–7) that Hegel has exaggerated the difficulties of conceiving the identity of Being and nought. (p. 338) "If the difference of Being and nought can be neither expressed nor defined, if they are as identical as different—if, in short, the idea of Being is only the idea of the pure void, I will say, not merely that Being transforms itself into Nothing, or passes into its contrary; I will say that there are not two contraries, but only one term which I have falsely called Being in the thesis, but which is in reality only Non-being without restriction—the pure zero." He quotes from Kuno Fischer (p. 340) the following remarks applicable here:

"If Being were in reality the pure void as it is ordinarily taken, Non-being would not express the same void a second time; but it would then be the non-void, i. e. the abhorrence of the void, or the immanent contradiction of the void."—(and again from his "Logik und Metaphysik" II. § 29): "The logical Being contradicts itself; for thought vanishes in the immovable repose of Being. But as Being comes only from thought (for it is the act of thought), it contradicts thus itself in destroying thought. Consequently thought manifests

itself as the negation of Being—that is to say, as *Non-being*. The Non-being (logical) is not the total suppression of Being—the pure zero—it is not the mathematical opposition of Being to itself as a negative opposed to a positive, but it is the dialectical negative of itself, the immanent contradiction of Being. Being contradicts itself, hence is Non-being, and in the concept of Non-being, thought discovers the immanent contradiction of Being—thought manifests itself at first as Being, and in turn the logical Being manifests itself as Non-being; thought can hence say, "I am the Being which is not."

"Such," continues our author, "is the deduction of M. Fischer. It seems to me very much inferior in clearness to that of Hegel." How he could say this is very mysterious when we find him denying all validity to Hegel's demonstration. Although Fischer's explanation is mixed—partly dialectical and partly psychological—yet, as an explanation, it is correct. But as psychology should not be dragged into Logic, which is the evolution of the forms of pure thinking, we must hold strictly to the dialectic if we would see the "Becoming." The psychological explanation gets no further than the relation of Being and nought as concepts. The Hegelian thought on this point is not widely different from that of Gorgias, as given us by Sextus Empiricus, nor from that of Plato in the Sophist. Let us attempt it here:

Being is the pure simple; as such it is considered under the form of self-relation. But as it is wholly undetermined, and has no content, it is pure nought or absolute negation. As such it is the negation by itself or the negation of itself, and hence its own opposite or Being. Thus the simple falls through self-opposition into duality, and this again becomes simple if we attempt to hold it asunder, or give it any validity by itself. Thus if Being is posited as having validity in and by itself without determination, (*omnis determinatio est negatio*), it becomes a pure void in nowise different from nought, for difference is determination, and neither Being nor nought possess it. What is the validity of the nought? A negative is a relative, and a negative by itself is a negative related to itself, which is a self-cancelling. Thus Being and nought, posited objectively as having validity, prove dissolving forms and pass over into each other. Being is a *ceasing* and nought is a *beginning*, and these are the two forms of *Becoming*. The Becoming, dialectically considered, proves itself inadequate likewise.

IV. The Dialectic.—To consider an object dialectically we have merely to give it universal validity; if it contradicts itself then, *we* are not in anywise concerned for the result; we will simply stand by and accept the result, without fear that the true will not appear in the end. The negative turned against itself makes short work of itself; it is only when the subjective reflection tries to save it by hypotheses and reservations that a merely negative result is obtained.

(Page 369): "In Spinozism the development of Being is Geometric; in the System of Hegel it is organic." What could have tempted him to use these words, it is impossible to say, unless it was the deep-seated national proclivity for epigrammatic statements. This distinction means nothing less (in the mouth of its original author) than what we have already given as the true difference between Wolff's and Hegel's methods; but M. Janet has long since forgotten his earlier statements. (Page 369) He says, "Hegel's method is a faithful expression of the movement of nature," from which he thinks Hegel derived it empirically!

On page 372 he asks: "Who proves to us that the dialectic stops at *Spirit* as its last term? Why can I not conceive a spirit absolutely superior to mine, in whom the identity between subject and object, the intelligible and intelligence would be more perfect than it is with this great Philosopher [Hegel]? * * * * * In fact, every philosopher is a man, and so far forth is full of obscurity and feebleness." Spirit is the last term in philosophy for the reason that it stands in complete self-relation, and hence contains its antithesis within itself; if it could stand in opposition to anything else, then it would contain a contradiction, and be capable of transition into a higher. M. Janet asks in effect: "Who proves that the dialectic stops at God as the highest, and why cannot I conceive a higher?" Judging from his attempt

at understanding Hegel, however, he is not in a fair way to conceive "a spirit in whom the identity between subject and object" is more perfect than in Hegel. "What hinders" is his own culture, his own self; "*Du gleichst dem Geist den du begreifst, nicht mir,*" said the World-spirit to Faust.

He asks, (p. 374): "When did the 'pure act' commence?" From Eternity; it always commences, and is always complete, says Hegel. "According to Hegel, God is made from nought, by means of the World." Instead of this, Hegel holds that God is self-created, and the world eternally created by him (the Eternally-begotten Son). "What need has God of Nature?" God is Spirit; hence conscious; hence he makes himself an object to himself; in this act he creates nature; hence Nature is His reflection. (P. 386): "The Absolute in Hegel is spirit only on condition that it thinks, and thinks *itself;* hence it is not *essentially* Spirit, but only *accidentally.*" To "*think itself*" is to be conscious, and, without this, God would have no personality; and hence if Hegel were to hold any other doctrine than the one attributed to him, he would be a Pantheist. But these things are not mere dogmas with Hegel; they appear as the logical results of the most logical of systems. "But in Plato, God is a Reason *in activity,* a living thought." M. Janet mentions this to show Plato's superiority; he thinks that it is absurd for Hegel to attribute *thinking* to God, but thinks the same thing to be a great merit in Plato. (P. 392): "Behold the Platonic deduction [or dialectic]: being given a pure idea, he shows that this idea, if it were *all alone,* [i. e. made universal, or placed in self-relation, or posited as valid for itself,] would be contradictory of itself, and consequently could not be. Hence, if it exists, it is on condition that it mingles with another idea. Take, for example, the multiple: by itself, it loses itself in the indiscernible, for it would be impossible without unity." This would do very well for a description of the Dialectic in Hegel if he would lay more stress on the positive side of the result. Not merely does the "pure idea mingle with another"—i. e. pass over to its opposite—but it *returns* into itself by the continuation of its own movement, and thereby reaches a concrete stage. Plato sometimes uses this complete dialectical movement, and ends affirmatively; sometimes he uses only the partial movement and draws negative conclusions.

How much better M. Janet's book might have been—we may be allowed to remark in conclusion—had he possessed the earnest spirit of such men as Vera and Hutchison Stirling! Stimulated by its title, we had hoped to find a book that would kindle a zeal for the study of the profoundest philosophical subject, as treated by the profoundest of thinkers.